Abstract of thesis entitled

Aspects of the grammar of Buli, a Gur language of northern Ghana

Submitted by

Darius ADJONG

for the degree of Doctor of Philosophy

at the University of Hong Kong

February 2025

This thesis describes Buli (Gur, Niger-Congo), covering aspects of its phonology, morphology, and syntax. The description focuses on language-internal facts but, wherever possible, draws on typological/comparative facts as supporting evidence. The primary source of my data is a corpus of recorded and transcribed naturalistic spontaneous texts, supplemented with elicited data.

Chapter 1 provides the extra-linguistic and methodological contexts of the description, discussing socio-cultural aspects of the Bulisa community and factors that have influenced their society. Topics covered include the name of the language, genetic classification, dialects/varieties, estimated speaker population, and language contact.

Chapter 2 describes Buli phonology, focusing on the sound inventory, syllable structure, phonotactic constraints, tone, and relevant phonological processes. These aspects are crucial for understanding the subsequent chapters.

Chapter 3 discusses nouns and their classes, focusing on their segmental features, semantic content, agreement patterns, and functions. The chapter also examines pronouns and

香港大學圖書館 HKU Libraries

other nominal elements that fulfil diverse functions, including marking definiteness, reflexivity, reciprocity, and interrogativity.

Chapter 4 describes the functions of various morphological elements, including quantifiers, property nouns, adverbial modifiers, ideophones, interjections, coordinators, and focus markers.

Chapter 5 focuses on verbs, examining their morphology and functional types. Verbs have limited inflectional morphology and a handful of them exhibit suppletion. They also possess a system of evolved extensions, which are currently unproductive, and exhibit grammatical rather than lexical tone.

Chapter 6 examines the grammatical categories of tense, aspect, mood, and negation. In addition to tone, the coding of these categories involves a combination of grammatical morphemes and lexical items at different stages of grammaticalisation.

Chapter 7 discusses simple clauses and question constructions, focusing on their syntactic constituents and functional types. Simple clauses discussed include verbal clauses (e.g. existential/locative clauses and the possessive clause) and verbless clauses (e.g. identificational and presentational clauses). Polar, alternative, and content questions are also covered in this section.

Chapter 8 explores spatial and temporal relations in Buli, showing the sources and lexical semantics of the elements that code these two domains. Native body part nouns and relational verbs, and loanwords typically code spatial and temporal relations.

Chapter 9 examines multi-verb constructions, focusing on serial verb constructions (SVCs). The morpho-syntactic properties and functional types of Buli SVCs are discussed, revealing properties of Buli SVCs that reflect widely attested cross-linguistic features and their idiosyncrasies.

香港大學圖書館 HKU Libraries

Chapter 10 discusses inter-clausal relations, focusing on the linking strategies and semantic implications of adverbial clause constructions and coordinated constructions. This section also describes constructions that express reported speech and thought.

Chapter 11 deals with information structure, examining the means of marking elements of sentences as the focus or topic.

Chapter 12 provides final remarks on this thesis, summarising the goal of this work, the scope and approach to description compared to previous research on the language, and the significance of this thesis.

香港大學圖書館 HKU Libraries

Aspects of the grammar of Buli, a Gur language of northern Ghana

by

Darius ADJONG

B.A., University of Cape Coast, Ghana
Dip. Ed., University of Education, Ghana
M.Phil., University of Ghana

A thesis submitted in partial fulfilment of the requirements for
the Degree of Doctor of Philosophy
at the University of Hong Kong

February 2025

香港大學圖書館 HKU Libraries

Dedication

To *Ànīāk*

香港大學圖書館 HKU Libraries

Declaration

I declare that this thesis represents my own work, except where due acknowledgment is made, and that it has not been previously included in a thesis, dissertation, or report submitted to this University or to another institution for a degree, diploma, or other qualifications.

Signed . . . . . .

Darius Adjong

香港大學圖書館 HKU Libraries

Acknowledgements

This description was made possible by the sacrifices of numerous people, some of which will probably go unmentioned. I apologise to those whose names may be missing due to my forgetfulness.

First and foremost, I would like to express deep gratitude to my supervisors at the University of Hong Kong: Prof. Kofi Yakpo and Dr. Joe Joseph Perry. Their willingness to supervise this thesis brought this work to fruition and led me on a remarkable PhD journey, introducing me to incredible individuals who have contributed invaluably to my academic growth. In addition to his primary supervisory role, Kofi granted me research freedom and offered recommendations that created networking opportunities beyond academia. I am thankful to Joe for discussing several issues of this grammar and reviewing some of my write-ups.

I am deeply indebted to Prof. Douglas Pulleyblank, whose support made my exchange at the Linguistics Department of the University of British Columbia (UBC) possible, and for his and Anne-Marie Comte's familial care. I would also like to express my heartfelt thanks to all the other faculty members at UBC's linguistics department, particularly Dr. Babel Molly, whose lessons I had the privilege to attend. I extend sincere appreciation to Dr. Samuel Akinbo and Dr. Alexander Angsongna for the time we spent together in Falkland discussing Buli phonology, and for their subsequent review of a draft chapter on the topic.

I express sincere gratitude to the linguists and researchers in France who have played a significant role in my academic journey. I extend copious thanks to the researchers at LLACAN for their support with my application for a LabEx mobility grant and their hospitality during my short visits to their laboratory. Despite my stays being briefer than anticipated and our meetings limited, our interactions provided me with valuable ideas to contemplate, ultimately guiding me towards arriving at compelling analyses.

香港大學圖書館 HKU Libraries

I wish to express special thanks to Profs./Drs. Dmitry Idiatov, Guillaume Segerer, Martine Vanhove, Mark Van de Velde, Pius Akumbu, Rozenn Guérois, Stéphane Robert, and Yvonne Treis for various forms of assistance. Guillaume, Martine, and Yvonne were three of my teachers at an insightful conference ("Semantic Shifts: From lexicon to grammar. Diachronic and typological perspectives") held in Fréjus. I benefited from the lectures and interactions with some of the erudite linguists and scholars in Europe and the world, including Profs./Drs. Annika Tjuka, Antoine Guillaume, Benjamin Fagard, Emmanuel Cartier, Ekkehard Koenig, Françoise Rose, Guillaume Jacques, Hilary Chappell, Lameen Souag, Maïa Ponsonnet, Maria Koptjevskaja-Tamm, Marianne Mithun, Thanasis Georgakopoulos, and Walter de Mulder.

In Ghana, I owe a debt of gratitude to the faculty at the University of Ghana and the University of Cape Coast. I continue on this academic path due to the inspiration and encouragement of my teachers and mentors at these great universities. At the University of Ghana, I thank Prof. Emmanuel Kweku Osam for cultivating my interest in linguistic typology. Akua Campbell, Dorothy Pokua Agyepong, George Akanlig-Pare, and James Saanchi deserve special mention for their interest in my academic growth. I am deeply grateful to Dr. Akua Campbell for her (and Auntie Deb) financial support, which made my first trip to Hong Kong possible, and for connecting me with her friend who also provided support in Hong Kong. This generous gesture means a lot to me, considering the uncertainties COVID-19 and Hong Kong's unsettling political atmosphere had brought at the time. The references of Dr. Dorothy Pokua Agyepong, Prof. George Akanlig-Pare, and Dr. James Saanchi opened the door to my admission at HKU. At the University of Cape Coast, Dr. Isaac Nuokyaa-Ire Mwinlaaru deserves my deepest his interest in my academic progress.

My PhD journey would have been daunting without the support of kind friends and acquaintances I met in Hong Kong, Canada, and France. In Hong Kong, I would like to express

香港大學圖書館 HKU Libraries

my appreciation to fellow graduate students and friends for their camaraderie: Antonia Alvares, Changhe Chen, Hwang Jinyoung, Jimmy Deng, Jonah Allan Lack, Lois Orekoya, Ming Liu, Robert Marcelo Sevilla, Samuel Sui Lung Sze, Shuang Zheng, Xiaoyu Yu, and Ying Heng. In Canada, I would like to thank Arzoo Tanwar and Adeola Babayode-Lawal for engaging in discussions on aspects of my work. In France, I would like to extend my gratitude to Chika Ajede, Miracle Oppong Peprah, Nlabephee Kefas Othaniel, and Salka Benoît Nouanti for their hospitability during my visits to France.

I am indebted to the University of Hong Kong for generously awarding me a 3-year post-graduate scholarship, which offered me the opportunity to study in a conducive environment. The travel grants provided by the Graduate School also subsidised my trip to Canada. I am sincerely grateful to the Research Council of the University of Hong Kong for the generous financial support. The scholarship brought my dream of obtaining a PhD degree into reality and opened doors to new opportunities. I express my heartfelt thanks to Pui Yee Chan (Doreen) for taking charge of administrative matters related to my research.

I would also like to acknowledge LabEx-EFL (Laboratory of Excellence Empirical Foundations in Linguistics) for granting me a mobility grant to conduct research at LLACAN in Paris. Many thanks to (Profs./Drs.) Barbara Hemforth, Christel Preterre, Dmitry Idiatov, Isabelle Alaniece, Jeanne Zerner, Magali Sansonetti, Martine Vanhove, and Yvonne Treis for various forms of assistance.

This description would not exist without the dedication of my language consultants and the Bulisa community. Their readiness to always provide me with data, sometimes at odd hours, and their willingness to repeat utterances countless times contributed to the creation of this final product. They are many to be listed individually here; however, I have listed names of regular consultants in the first chapter of this thesis. Thanks to the following scholars whose work on the Bulisa and their language has been foundational to this thesis: Profs./Drs. Anne

香港大學圖書館 HKU Libraries

Schwarz, Franz Kröger, and George Akanlig-Pare. Franz Kröger deserves special mention for mailing me copies of his Buli dictionary and other relevant materials at the initial stages of thesis writing.

Last but not least, I would like to express my gratitude to my family in Ghana for their prayers and encouragement. I am incredibly thankful to Desmond, Esther, Francis, and Thomas for their familial support and various forms of assistance, including serving as voluntary research assistants, to bring this work to fruition. I hope the outcome of this work instils in us the motivation to strive for the life that inheritance could not provide us.

Post-Defense Acknowledgments:

I am grateful to Prof. Mark Van de Velde, Prof. Stephen J. Matthews, and Dr. Brian W. King for serving as the examiners of this thesis. Their thorough review of the entire work and valuable feedback significantly enhanced its quality. Any remaining errors are my sole responsibility.

香港大學 圖書館 HKU Libraries

Contents

Dedication ..... **i**

Declaration ..... **ii**

Acknowledgements ..... **iii**

Contents ..... **vii**

List of tables ..... **xv**

List of figures ..... **xvii**

Abbreviations and symbols ..... **xviii**

1 Introduction **1**

1.1 The people and their history 1

1.2 Bulisa society 4

1.3 Social change 6

1.4 Genetic Classification: 'Gur', 'Mabia' or a new label? 8

1.5 Language contact and multilingualism 14

1.6 Data collection and consultants 16

1.7 Orthographic conventions 18

1.8 Previous studies on Buli 21

1.9 Motivation for this study 25

1.10 Significance of the thesis 27

2 Phonology **28**

2.1 Buli sound system 29

2.1.1 Consonant inventory and properties 29

2.1.2 Distribution and phonemic properties of consonants 30

2.1.2.1 Nasals: /m, n, ɲ, ŋ, ŋ͡m/ 30

2.1.2.2 Plosives: p/b, t/d, k/g, k͡p/g͡b 33

2.1.2.3 Affricates: ʧ/ʤ 38

2.1.2.4 Fricatives: f/v, s/z, ... 39

2.1.2.5 Liquids /l, r/ 41

2.1.2.6 Approximants: /j, w/ 43

2.1.3 Vowel inventory and features 45

香港大學圖書館 HKU Libraries

2.2 The syllable 48
2.2.1 Syllable types 48
2.2.2 Syllable template 49
2.2.3 Constraints on consonants in a syllable 52
2.3 Phonological processes 53
2.3.1 Vowel lengthening, diphthongisation, and hiatus resolution 53
2.3.2 Vowel harmony 59
2.3.3 Vowel elision and vowel insertion 60
2.3.4 Vowel and consonant deletion 63
2.3.5 Nasalisation and homorganic assimilation 64
2.3.6 Devoicing of obstruents 67
2.4 Tone 68
2.4.1 Inventory, structure, and function of tone 68
2.4.2 Tonal processes 71
2.4.2.1 Tone copying 71
2.4.2.2 Tone spreading 73
2.4.2.3 Simplification of L.H to L.L 74
2.5 Adaptation of loanwords 77
2.6 Conclusion 79
3 Nominal morpho-syntax 80
3.1 Introduction 80
3.2 The internal structure of core nouns 81
3.3 Morphological classes of nouns 83
3.3.1 Basic (underived) nouns 84
3.3.1.1 Classes 1 and 2 nouns 84
3.3.1.2 Classes 3 and 4 nouns 85
3.3.1.3 Classes 5 and 6 nouns 86
3.3.1.4 Classes 7 and 8 nouns 87
3.3.1.5 Class 9 nouns 88
3.3.2 Derived nouns 89
3.3.2.1 Agentive nouns 89
3.3.2.2 Other derived nouns 90
3.3.3 Property nouns 92
3.4 Number marking function of class suffixes 95
3.5 Comparative-Gur perspectives on the noun classes 97

香港大學圖書館 HKU Libraries

3.6 Combining nouns and adnonimals ... 102
3.6.1 Combining nouns and numerals ... 102
3.6.2 Combining core nouns, property nouns, and numerals ... 103
3.7 Class pronouns ... 104
3.8 Definiteness markers ... 109
3.8.1 Marking definiteness ... 112
3.8.2 Special cases with definiteness marking ... 113
3.9 First and Second person pronouns ... 116
3.10 Relative pronouns ... 122
3.11 Contrastive marker *ǹ-* ... 131
3.12 Reflexive marker *dék* ... 134
3.13 Reciprocal marker *chāāb* ... 137
3.14 Presentative demonstrative *ǹnā* ... 140
3.15 Deictic demonstratives *lé* and *lá* ... 141
3.16 Demonstrative adverbs *dé* and *dú* ... 150
3.17 Interrogative markers ... 151
3.17.1 *nà* ... 151
3.17.2 *bɔ̀à 'what'* ... 153
3.17.3 *sɛ̀* 'how' ... 155
3.17.4 *bɛ̄* 'where' and *lè* 'be where' ... 155
3.17.5 *dìnpō* and *dìsàpō* 'when' ... 157
4 Other word classes ... 158
4.1 Quantifiers ... 158
4.1.1 Numerals ... 158
4.1.1.1 Numerals 1 to 10 ... 158
4.1.1.2 Forming numerals 11 to 19 ... 159
4.1.1.3 Forming numerals 20 to 99 ... 161
4.1.1.4 Forming numerals 100 to 1000 ... 162
4.1.1.5 Enumeration (non-referential) numerals ... 163
4.1.1.6 Numerals in quantification function ... 163
4.1.1.7 Combining numerals with *nɔ́í* (pl. *nɔ́á*), *ná*, and *nántúéná* ... 164
4.1.1.8 Combining numerals with *sāārī* ... 166
4.1.1.9 The numeral intensifier *dékí* ... 166
4.1.1.10 The quantifier *yéŋ* 'single' ... 167

香港大學圖書館 HKU Libraries

4.1.1.11 Expressing ordinal numerals 168
4.1.2 Non-numeral quantifiers 169
4.1.2.1 *míéná* 169
4.1.2.2 *gēlā* 172
4.1.2.3 *màgà* 172
4.1.2.4 *yègà* 173
4.1.2.5 *wùù* 173
4.2 Noun-noun modification 174
4.3 Nominal derivation 179
4.4 Personal name marker *a-* 182
4.5 Reduplicated nouns 184
4.6 Repetition 185
4.6.1 General repetition 185
4.6.2 Repeating *tā* and *mā* 188
4.7 Adverbial modifiers 189
4.7.1 *pīlīm, ŋmān ~ ŋmànà* 'repetitive' 189
4.7.2 *ŋmānsī* 'steadfastly' 190
4.7.3 *ǹwūlī* 'early, quickly' 191
4.7.4 *dìèm ~ dìèmà* 'still, yet' 191
4.7.5 *dērī ~ dèrà* 'suddenly, immediately' 192
4.7.6 *sūm ~ sùmà* 'truly, indeed' 192
4.7.7 *dìn* 'persistently' 193
4.7.8 *nyīēm* 'habitually, usually' 193
4.7.9 *tɔ̄g(-ní)* 'really' 193
4.7.10 *ŋāām* 'in advance' 194
4.7.11 *bùrá* 'unexpectedly' 194
4.7.12 *mànà* 'unquestionably' 194
4.7.13 *pōōm* 'anyway, nevertheless' 195
4.7.14 *ná* 'perhaps' 195
4.7.15 *nín* 'in case, what if' 196
4.7.16 *mɔ̀à* 196
4.7.17 *yáán* 'most likely' 196
4.7.18 *tɔ̄rīm* 'at all odds' 197
4.7.19 *nyìnì* 'since, from' 197
4.7.20 Distribution of adverbial modifiers 198
4.8 Ideophones 199
4.9 Interjections and other minimal utterances 203

香港大學圖書館 HKU Libraries

4.10 Emphatic marker *=mā* 206
4.11 *lá* 208
4.12 *lī ~ nī* 208
4.13 *ká* and *dāā* 209
4.14 Coordinators 210
5 Verbs 213
5.1 Introduction 213
5.2 Dynamic versus Stative verbs 214
5.3 Verb extensions 220
5.3.1 Observations about verbal extensions 222
5.3.2 Economy of extensions 225
5.4 Tonal morphology 227
5.5 Exceptional cases 230
5.5.1 *chièn* versus *jām* 230
5.5.2 *chɛ̄ŋ* versus *gā* 231
5.5.3 *bō* versus *kā* 231
5.6 Repetition of verbs 232
6 Tense, aspect, mood, and negation 233
6.1 Imperfective and Perfective aspects 234
6.2 Marking future tense with *lì* 236
6.3 Recent past marking with *pòòm* 237
6.4 Cancelled past marking with *jàm* 237
6.5 Progressive aspect 238
6.6 Mood and Modality 241
6.6.1 Imperative 242
6.6.2 Making suggestions and expressing wishes 243
6.6.3 Modality 243
6.6.3.1 Dynamic modality 244
6.6.3.2 Deontic modality 245
6.6.3.3 Epistemic modality 246

香港大學圖書館 HKU Libraries

6.7 Negation 250
6.7.1 Negative imperfective 250
6.7.2 Negative future 250
6.7.3 Negative imperative 251
6.7.4 Negative perfective 252
6.7.5 Negative states 252
6.7.6 Negative progressive 253
6.8 Suppletion in negation 253
6.8.1 *ká* versus *dāā* 253
6.8.2 *bō* versus *kā* 254
6.8.3 *tā* versus *kā* 254
6.8.4 Suppletion involving the prospective marker *zā* ('stand') 255
6.9 Remarks on previous analyses of the negation markers 256
7 Simple clauses 259
7.1 Introduction 259
7.2 Basic verbal clauses 260
7.3 Existential and locative clauses 266
7.4 Possessive clause 269
7.5 Identificational and equative clauses 271
7.6 Presentational clause 275
7.7 Question constructions 276
7.7.1 Polar questions 276
7.7.2 Alternative questions 277
7.7.3 Content questions 279
8 Spatial and temporal relations 285
8.1 Introduction 285
8.2 Expressing spatial relations with nouns 286
8.3 Expressing spatial relations with verbs 291
8.4 Expressing temporal relations 293

香港大學圖書館 HKU Libraries

9 Multiverb constructions 299

9.1 Introduction 299

9.2 General observations: SVCs versus Complex sentences 300

9.3 Overview of Buli serial verb constructions 302

9.4 Morpho-syntactic properties of Buli SVCs 303

9.4.1 Argument sharing 303

9.4.2 Same tense, aspect, and mood values 305

9.4.3 Same negation marking 306

9.5 Functional types of Buli SVCs 307

9.5.1 Motion-direction SVC 308

9.5.2 Motion-action SVC 309

9.5.3 Participant-introducing SVC 310

9.5.4 Adverbial SVC 312

9.5.5 Time–Aspect SVC 314

9.6 Consecutive and Non-consecutive SVCs 315

10 Interclausal relations 317

10.1 Introduction 317

10.2 Connectives and their semantic relations 318

10.3 Adverbial clauses 319

10.3.1 Time clauses with *lī* and *lá* 319

10.3.2 Time clauses with *dàn* 321

10.3.3 Conditional clauses with *dàn* 323

10.3.4 Manner clauses with *àsī* 325

10.3.5 Negative conditional (apprehensive) clause with *sēkā* 326

10.3.6 Purpose clauses with *àyén* 327

10.3.7 *Àtì*-adverbial clauses 327

10.4 Coordination 330

10.4.1 Conjunctive coordination with *àlì, àbī,* and *yāā* 330

10.4.2 Disjunctive coordination with *kóó* and *yàā(sī)* 332

10.4.3 Adversative coordination with *àlīgè* and *àmāā* 332

10.4.3.1 Adversative clauses with *àlīgè* 332

10.4.3.2 Adversative clauses with *àmāā* 334

10.4.4 Parataxis (covert coordination) 335

10.5 Reported speech and thought 336

10.5.1 Attention getters: *nāā* and *(ǹ)wāā* 338

香港大學圖書館 HKU Libraries

11 Information structure 339

11.1 Introduction 339

11.2 Focus marking with *lī* 340

11.3 Focus marking with *ká* 342

11.4 Relationship between *ká* and *lī* 347

11.5 Topic shift and emphasis with *tɔ̄g(ní)* 348

12 Final remarks 350

References 352

Appendix A: Slave raids in Buluk 361

Appendix B: Cooking process of *wɔ̄gtā* soup 367

香港大學圖書館 HKU Libraries

List of tables

Table 1: Overview of the classification of Buli 11
Table 2: Primary consultants 17
Table 3: Orthographic representation of consonants 18
Table 4: Orthographic representation of vowels 19
Table 5: Consonant inventory 29
Table 6: Phonemic contrast between nasals and other consonants 31
Table 7: Vowel inventory 45
Table 8: Minimal sets showing contrast in vowels 47
Table 9: Distribution of consonants in a syllable 52
Table 10: Morphological classes of nouns 83
Table 11: Derivational functions of class markers 89
Table 12: Noun classes in Buli and Proto-Gur 97
Table 13: Semantic content of class pronouns 105
Table 14: Class pronouns vs. Definiteness markers 109
Table 15: Forms and Functions of first and 117
Table 16: Relative pronouns 122
Table 17: Reflexive pronouns 134
Table 18: Proximal and distal demonstratives 142
Table 19: Interrogative pronouns 151
Table 20: Numerals 1 to 10 159
Table 21: Numerals 11 to 19 160
Table 22: Numerals 20 to 99 (multiples of 10) 161
Table 23: Numerals 100 to 1000 162
Table 24: Enumeration numerals 163
Table 25: Ordinal numerals 169
Table 26: Nominal derivation with *-tìrì* and *-nì* 179
Table 27: Nominal derivation with *-dēnɔ̄* (pl.*-dēm*) 180
Table 28: Nominal derivation with *-nyɔ̄nɔ̄* (pl. *nyām*) 181
Table 29: Reduplicated nouns derived from verbs 184
Table 30: Functions of repetition 185
Table 31: Ideophones 200

香港大學圖書館 HKU Libraries

Table 32: Interjections 204
Table 33: Coordinators 210
Table 34: Dynamic and stative verbs 214
Table 35: Semantic classes of verbs 217
Table 36: Verbs extensions in previous studies 220
Table 37: Verb extensions in this study 222
Table 38: Functions of question words and expressions 280
Table 39: Relational nouns 287
Table 40: Relational verbs 291
Table 41: Temporal nouns 293
Table 42: Loaned temporal nouns 297
Table 43: Connectives, linking strategies, and semantic implications 318

香港大學圖書館 HKU Libraries

List of figures

Figure 1: Situating Buluk on a map of Ghana 2
Figure 2: Classification of Buli by Ethnologue (Eberhard, Gary & Charles 2024)..... 8
Figure 3: Syllable template..... 50

香港大學圖書館 HKU Libraries

Abbreviations and symbols

-	morpheme boundary
=	clitic boundary
(…)	untranscribed part of utterance
1	first person
2	second person
3	third person
ADVB	adverb
ATG	attention getter
C	consonant
CL	class marker
CNC	cancelled
COMP	complementiser
COND	conditional
CONN	connective
CONTR	contrastive marker
COP	copula
DEF	definite marker
DIST	distal
EMPH	emphatic marker
EXCL	exclusive
FOC	focus marker
FUT	future marker
INTERR	interrogative marker
INTENS	intensifier
H	high tone
IDEO	ideophone
IPFV	imperfective
L	low tone
LOC	locative
M	mid-tone
INCL	inclusive
MVC	multi-verb construction
NAME	personal name
NEG	negation marker
NMLZ	nominalizer
NP	noun phrase
PERS	personal name marker
PGR	proto-Gur
PL	plural
PLACE	place name
PFV	perfective
PRED	predicate
PROX	proximal
PRT	particle (unnamed)
PST	past
QUOT	quotative
REL	relativiser
SC	serial connector
SG	singular
SUB	subordinator
sp.	more special
SP	sentence particle
SVC	serial verb construction

香港大學圖書館 HKU Libraries

1 Introduction

1.1 The people and their history

This grammar is about Buli (glottocode: buli1254), the language of an ethnic group whose homeland Buluk is in northern Ghana. The people call themselves *Bùlìsà*[1] (singular: *Bùlɔ̀*), but they are usually erroneously called *Kànjágà* which is a narrow demonym for only one of their towns. Population figures based on ethnolinguistic data do not exist for Buli and other Ghanaian languages. Nevertheless, Bodomo (2020) cites 200.000 as an approximate figure for first-language speakers of Buli.

Figure 1 situates Buluk (right) on a map of Ghana (left). As shown on the Buluk map, Mamprusi, Talensi (subgroup of Farifari), Sisala, and Kasena are the closest neighbours of the Bulisa. The map of Ghana shows some major towns in Ghana, especially towns that share borders with Buluk in northern Ghana. The legend lists the languages spoken in each town and assigns numerical values to correspond with the respective language areas on the map.

香港大學圖書館 HKU Libraries

[1] Sometimes spelt 'Bulsa' or 'Builsa' officially

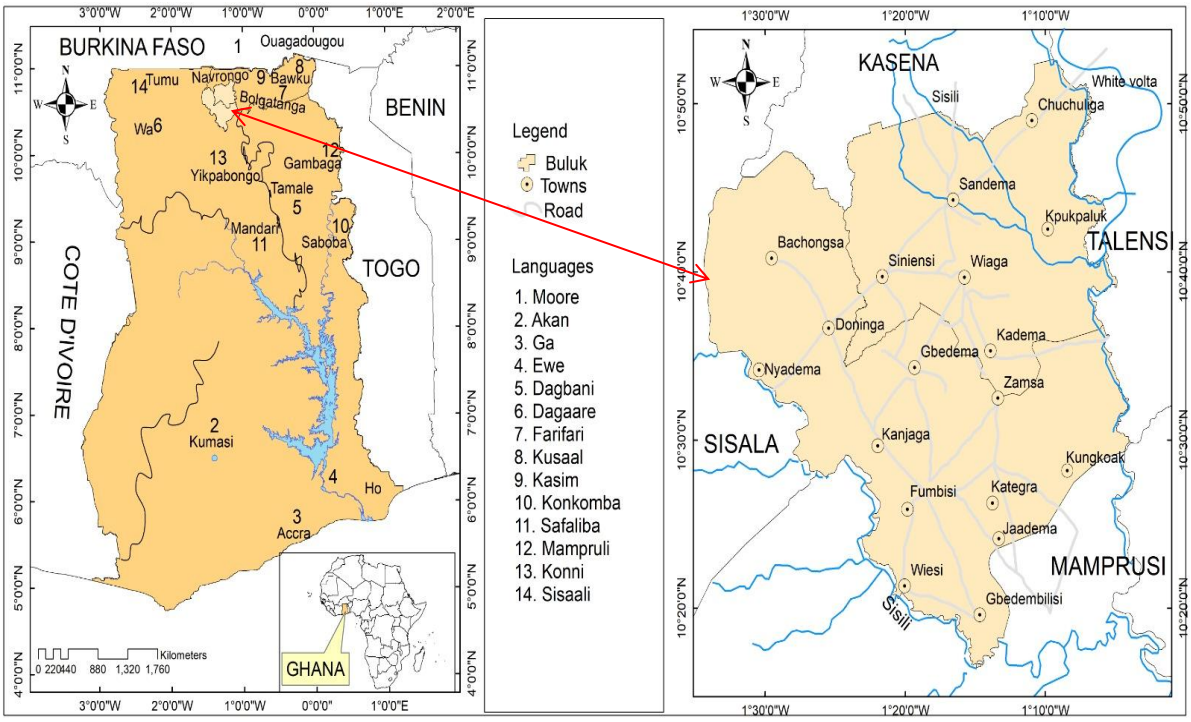


Figure 1: Situating Buluk on a map of Ghana

The land is irrigated by small watercourses, including streams and tributaries emanating from the White Volta that originates in Burkina Faso and descends through northern Ghana to converge with the Black Volta. These water bodies support the agrarian Bulisa economy, hydrology, and domestic activities. Otherwise, the land becomes dry due to the long harmattan season and dry winds blowing from the Sahara Desert, leaving vast carpets of grass and trees to wither. Buluk is home to the baobab, shea, neem, and rosewood trees which have unique medicinal, nutritional, and commercial benefits. Domestic animals reared for their meat and other purposes include sheep, goat, poultry (especially chicken, and guinea fowl). Cattle are also raised for their meat, milk, and medicinal benefits – and especially for their cultural value (e.g. rituals, prestige, wealth) and for farm labour.

Intensive investigations are needed to establish the true origin(s) of the Bulisa, as there are currently about eight conflicting accounts. The common thread in the conflicting accounts about Bulisa origin is that they are an intermixed ethnic group, some of whom are descendants of the Mamprusi and other neigbouring ethnicities (especially the Sisala and Kasena) (see

香港大學圖書館 HKU Libraries

Figure 1). Notably, the Mamprusi are said to have arrived in the territory of modern Ghana around the 16th century and established the Mamprugu chiefdom, having migrated from the present-day Burkina Faso. Archaeological findings in some regions of northern Ghana (see Anquandah 1998) suggest that the earliest inhabitants of Buluk were hunters and gatherers who occupied the land as far back as the Iron Age (around 1,200 BCE - 500 BCE). Kröger (2008) also surmises that some migrants who abandoned life in the Sahara Desert when its fertility declined might have sought refuge in the Buluk area.

Given their ambiguous origins and their geographical location near prominent empires and chiefdoms (e.g. Asante chiefdom, Dagbon chiefdom, Mamprugu chiefdom), it was inevitable that the Bulisa would experience a tumultuous history in the subsequent years. Widely circulated legends claim that slave raiders (notably Babatu and Samori) came from across the Ghana-Burkina Faso border to attack the Bulisa in a series of raid expeditions in the 18th and 19th centuries. Although the Bulisa had encounters with slave raiders, the accounts are not always consistent. For instance, some of the purported slave raiders (e.g. Samori Touré) are known to be African heroes believed to have founded empires and formed diplomatic alliances to oppose French colonial expansion within the West African subregion in the 1880s. Most importantly, the Bulisa were severely affected by the trans-Atlantic and trans-Saharan slave trades, which have influenced Bulisa society to the present day.

香港大學圖書館 HKU Libraries

1.2 Bulisa society

Bulisa society is a gregarious group bonded together by their shared historical experiences, beliefs as well as common norms, values, and beliefs. The family (*yérí* 'compound') is the most enduring social unit, and every member is obliged to ensure the family's existence beyond their own lifespan. The society comprises both the living and the dead, including all children yet to be born. For this reason, Bulisa follow an agnatic kinship system which ensures that the 'male', rather than the 'female' who typically marries and leaves the *yérí*, protects the family's legacy. The matrilineage is, nonetheless, properly maintained to ensure that any misfortune stemming from the maternal line is curbed (see Kröger (1982) for *mà bagì* 'mother's might' and *júúk* 'mongoose' rituals) and also to ensure that the male is not deprived of certain benefits from the maternal line.

The eldest male, who becomes the family head ('*yérí nyɔ̄nɔ̄'*), caters for the total wellbeing of every family member (*yérí dēnɔ̄*, pl. *yérí dēm*), including their physical, mental, social, emotional and spiritual health. A *yérí nyɔ̄nɔ̄* offers sacrifices to venerate the ancestors regarded as mediators between the living and *Nààwén* ('Supreme God'). In bad times (e.g. death of a family member, incest) or good times (e.g. marriage of member), the *yérí nyɔ̄nɔ̄* leads the charge in appeasing the gods and performing rites or ceremonies appropriately. Also, a *yérí nyɔ̄nɔ̄* oversees the distribution of family property, mediates family disputes, officiates marriages, and teaches young ones (especially males) family values, customs and rituals. The family's land, cattle, and *yérí* 'house' are all managed by the *yérí nyɔ̄nɔ̄*. The *yérí nyɔ̄nɔ̄* determines, for instance, which land or cow should be sold in times of severe financial difficulties, or which cattle should be offered as sacrifice to avert a calamity that has befallen the family. Finally, the *yérí nyɔ̄nɔ̄* teaches the young male best farming practices, cattle-herding and guides them to make critical decisions like whom (not) to marry.

香港大學圖書館 HKU Libraries

Beyond the family is the clan (also called *yérí*), which comprises families who trace their consanguineous patrilineage to a common ancestor. This ancestor is believed to be the founding father of the clan. So, each family, led by the family head, is a religious cult with a *bɔ̀glūk* 'shrine' to worship the founding ancestor. The families, thus, form a patriclan comprising several clusters of compounds usually within the same physical location (a larger compound). The heads of the various families *kò bísà* (lit.: father's children) act as a council that makes critical decisions on behalf of the family. The head of the clan, chosen based on generational seniority, becomes the guardian of the ancestral shrine.

At the macro-level of Bulisa society, there are several earthshrines (*tàŋgbànà*, sg. *tàŋgbàn* > *tɛ̄ŋ* 'land' *gbān* 'skin') objectified in natural resources like rocks, trees, rivers. These earthshrines are deities that regulate the state of the entire community, ensuring that essential human needs such as rainfall and sunshine are not lacking. These deities can be invoked for assistance in times of immense distress (e.g. drought, famine, family feud) or appeased in times of contentment (e.g. bumper harvest, peace). The chief (*nààb*, pl. *nàlìmà*) of the affected area plays a lead role in such situations. Chiefs of the various communities constitute a council headed by a paramount chief. The late Ayieta Azantilo holds the distinction of being the longest-serving paramount chief. He reigned from 1931 to 2012 and continues to be highly respected and revered today. Among other things, chiefs play lead roles during funerals and festivals. Festivals and funerals are grand events that establish bonds between individuals or families, honour the living and the dead through customs and traditions, and foster communal living while also providing a platform for discussing and planning developmental projects. In southern Ghana, there are diaspora chiefs (usually the earliest settler or oldest *Bùlɔ̀*) who have oversight responsibilities for Bulisa's wellbeing.

香港大學圖書館 HKU Libraries

The Bulisa maintain close ties with their neighbours, especially the Farifari and Dagaaba, whom they address by the matronym *mà bíík* (‘mother’s child) to suggest that they are all descendants of the same maternal ancestry.

1.3 Social change

Many years of contact with external cultures has shaped Bulisa society in significant ways. First, the slave raids must have driven out some indigenes and attracted foreigners to Buluk. Historians and anthropologists (e.g. Kröger 2008; Saboro 2021) report that the Bulisa deserted their hometown during the slave raids, sometimes seeking refuge in caverns and hollow trees. Currently, the rate of emigration is quite high, primarily motivated by the search for educational and professional prospects in southern Ghana and overseas. This situation has partly been caused by recent weather change patterns, which has made farming less supportive of livelihood in the region. Bulisa have established trade relations with geographically close (e.g. Kantosi, Koma, Talensi) and distant (e.g. Mossi) neighbours, some of whom have made Buluk their permanent home. Intermarriages between Bulisa and these and other ethnic groups in Ghana (e.g. Akan, Dagaare, Ewe) have also shaped Bulisa social systems significantly. Indeed, Bulisa social structures have also been influenced by a variety of colonial and nation-building activities.

Since Ghana’s independence in 1957, Buluk has been part of a country governed by an elected government. Traditional chieftaincy forms part of a national government structure. This means that decisions taken by chiefs do not subvert what is considered the national interest, as enshrined is Ghana’s constitution. Female genital mutilation (‘*ŋārīká’*) and institutionalised marriage (‘*àdànlíé*’) are some practices that have been regulated by constitutional instruments. Geographically, the whole Buluk area (named Bulisa district under a national government

香港大學圖書館 HKU Libraries

instrument) had been one of 261 administrative regions of Ghana from 1988 to 2012 after which the area was split into two (Bulisa North and Bulisa South). This political administrative divisions have put some Bulisa villages in other territories – Kategra and Kunkuok in Mamprugu Moagduri (a Mamprusi district), and Biuk in Kasena Nankana (a Kasena district). This certainly has significant impact on social interaction.

Bulisa religious belief systems have also been influenced by foreign religions, especially Islam and Christianity. Early traders, including the so-called slave raiders (Babatu and Samori), purportedly were Muslims who engaged in proselytisation alongside their nefarious activities. Later, Muslim traders from Burkina Faso engaged in cola-nut and other business ventures in Buluk and several parts of northern Ghana. Bulisa's neighbours (e.g. Koma, Dagomba) are predominantly Muslims. As for Christianity, Presbyterian (formerly Basel) and Catholic missionaries started their evangelizing activities as early as the 19th century. Missionary activities are increasingly expanding in Buluk and across Ghana. As a result, numerous Bulisa have now converted to the Christian faith.

To conclude, a variety of factors have shaped Bulisa social structures. The causes discussed in this section have focused on how some major events and state institutions have shaped Bulisa traditional systems. In some situations, the social change is as a result of an individual preferences sometimes influenced by global trends. For instance, although traditional dishes (e.g. *sāāb*), dance (e.g. *nāgēlā*, *dūēlīmká*), clothing (e.g. *gàrù-gēlīk* 'smock') exist, individuals have personal preferences.

香港大學圖書館 HKU Libraries

1.4 Genetic Classification: ‘Gur’, ‘Mabia’ or a new label?

Buli belongs to the Gur family, as shown in Figure 2.

Figure 2: Classification of Buli by Ethnologue (Eberhard, Gary & Charles 2024)

The appropriateness of the term “Gur,” employed by colonial linguists, has recently been called into question by some native-speaker linguists, who have advocated for the name “Mabia” as a replacement (see Bodomo 1993, 1994, 2020). Notably, Adams Bodomo has been particularly critical of the continued use of the term “Gur,” describing it as derogatory and refuting claims that it is an acronym derived from the initial syllables of languages within the “Gur” family. As Bisilki and Yakpo (2024) observe, the advocacy for “Mabia” reflects native-speaker linguists’ efforts to assert ownership and foster greater authenticity for this branch of the Niger-Congo language family.

In fact, the origin of the label “Gur” remains uncertain to this day. Seminal works that use the term often trace it back to early European traders in West Africa, though these claims are typically unsubstantiated and lack verifiable evidence. For instance, Westermann and Bryan (1952: 55) suggest that “Gur” was adopted by Christaller based on a proposal by the German trader G. A. Krause, and that it is derived from names like “Gurunsi” and “Gurma”,

香港大學圖書館 HKU Libraries

which are frequently mentioned by speakers of "Gur" languages. However, neither the claim that names of "Gur" languages begin with the syllable "Gur" nor the assertion that speakers of these languages use such terms is accurate. As will be shown later in this section, the term "Gurunsi" has also been deemed derogatory, though efforts to abolish it appear to have been abandoned.

By the 1980s, the "Gur" languages, unlike their Kwa neighbors such as Akan and Ewe, had attracted little serious linguistic attention. This was partly due to their unfavorable geographic location and socio-economic challenges (see, for example, Christaller 1875; 1881; Westermann 1928; 1930 for studies on Akan and Ewe). As a result, the people of northern Ghana, along with their languages, were poorly understood until research in the region gained momentum in recent decades. Three decades ago, Dakubu (1988), in an edited volume on Ghanaian languages, described the state of linguistic knowledge about "Gur" languages as "unsatisfactory," noting that only a "small number of people" were qualified to write about them. Similarly, Tony Naden, who has produced some of the most influential comparative studies on "Gur" languages (see Table 1), pointed out that numerous names have been applied to "Gur" languages, many of which are "mistaken labels derived from misunderstandings by early explorers or administrators." Other seminal works, such as Bendor-Samuel (1965), acknowledge the misunderstanding, particularly with Buli and its neighbours being lumped into the "Gur" family.

At present, the origin of the term "Gur" is less important than the ongoing use of multiple terms to describe the same group of languages descended from a common ancestor. This practice is unlikely to change soon, if at all, given that the term "Gur" has been entrenched in influential linguistic classifications (e.g. Greenberg 1963), institutionalised (e.g. the "Gur-Gonja" linguistics department at the University of Education in Ghana), and continues to appear in recent studies on African languages (e.g. Güldemann 2018). Moreover,

香港大學圖書館 HKU Libraries

the advocacy for “Mabia” has not yet been widely accepted within the broader linguistics community. For a less familiar language family that is only now attracting significant scholarly interest, broader consultations will be necessary to adopt a single label for typological and cross-linguistic comparative studies involving these languages.

In this work, I use the terms “Gur” and “Mabia” interchangeably due to my frequent comparisons of Buli to its close and distant relatives. Using Table 1, I demonstrate that Buli, like its relatives, has been classified under both “Gur” (and related terms) and “Mabia.” Notably, the earliest “Gur” labels originally referred to both the people and their languages. As shown in the table, Buli and its speakers were erroneously referred to as “Kanjaga” in some instances. Following the table, I provide a brief explanation of an abandoned debate on the term “Gurunsi,” which appears to have given rise to the term “Gur.”

香港大學圖書館 HKU Libraries

Table 1: Overview of the classification of Buli

Label	Source	Description
Gurunsi (also Gurusi, Grussi, Grusi, Grunsi)	Christaller (1889)	• Colonial term for enslaved people and language samples collected from these slaves • Term broadly designates languages spoken by slaves scattered across a wide geographic area (formerly considered Sudanic areas) • No serious attempt at language classification (but compares limited samples, some drawn from Krause's wordlist)
Gurunsi	Westermann (1913b; 1914)	• Attempts to classify languages based on limited samples collected from "Sudanic" areas • Proposes Grussisprachgebiet ("Grussi language area") within broader Sudanic area • Presents **"Kanjaga" (Buli)** as Gurunsi language, following Christaller's use of term.
Gur, Grussi	Westermann (1927)	• Proposes a Gur[2] language area • **"Kanjaga" (Buli)** subsumed under Gur • Subsumes Grussi and six others (Mossi, Tem, Bargu, Gurma, Kiliná, Senufo, and Songai) under Gur
Gur, Grussi	Westermann & Bryan (1952)	• Provides an expanded list of languages classified under "Gur" (as a larger unit) • Presents Grussi as a single unit (other single units are Senufo, Tem, and provisionally Kulango, Gruma, and Bargu • Lists **"Kanjaga" (Buli)**, Kasena, and Tamprusi etc. as members of Grussi subcluster
Gur, Mole-Dagbani	Bendor-Samuel (1965)	• Corrects erroneous use of **"Kanjaga"** • Focuses on Westermann & Bryan's (1966) Grussi subcluster and suggests revisions based on data collected from six communities (Kasena, Vagala, Sisala, Tamprusi, Mo (Degha), and Chakali) • Proposes that **Buli** belongs to a different cluster called Mole-Dagbani rather than Grussi.

香港大學圖書館 HKU Libraries

[2] 'Gur', according to Westermann & Bryan (1952: 55), was "adopted by Christaller from a suggestion of G. A. Krause. It is derived from the names Gurma, Gurunsi, & c., of frequent occurrence among speakers of these languages". The term "Voltaic" (French: Voltaïque) has also been applied to this larger unit.

Gur/Grusi	Swadesh et al. (1966)	• Contains a larger language sample • Proposes 10 subclusters for Gur • **Buli** is classified under Moore-Dagbani which is a subdivision of Gurma-Moore, one of the 10 clusters
Gur, Niger-Congo,	Greenberg (1963)	• A broad classification of African languages based on large languages drawn mostly from previous studies (especially Westermann) • Gur classified as a branch of the Niger Congo phylum • **"Kanjaga/Bulea" (Buli)** classified under Gur
Gur, Grusi, Oti-Volta	Naden (1988; 1989)	• Classification is based on earlier comparative studies and wordlists • Proposes "Proto-Gur" (highest, ancestor of Gur languages) • Proposes several subdivisions of Proto-Gur and states these five: Senufo, Kulango, Lobiri, Central Gur, Bargu • Identifies two major sub-branches of Central Gur: Grusi and Oti-Volta • Classifies **Buli** under Oti-Volta
Gur, Gurunsi, Oti-Volta	Schwarz (2005)	• Classification follows Naden (1988; 1989) • Splits Central Gur into two branches: Northern and Southern • Classifies **Buli** as Northern Central branch of Oti-Volta • The Southern central branch is occupied by Gurunsi languages (e.g. Kasim)
Mabia	Bodomo (1993; 1994; 2020)	• Term derived from pan-Mabia morpheme *ma-* and cognates of "child" (i.e. 'mother's child') in Buli and its relatives (*Ma-biik* in Buli, *Ma bia* in Dagaare, *Ma biya* in Gurenɛ, etc.) • Classifies **Buli** and Konni as Mid-Central Mabia (Central Mabia includes dialects of Farifari)

香港大學圖書館 HKU Libraries

The term “Gurunsi” had previously been deemed derogatory, prompting calls for its abolishment. However, no substantial efforts were made to eliminate its use. For instance, Zwernemann (1958) acknowledges that the term is derogatory but justifies its continued use on the grounds that no suitable substitute was available:

> “…a term [Gurunsi] which has acquired a certain significance for ethnologists as well as for linguists cannot be abolished before a suitable substitute has been found. If we were to find such a term, it is surely unlikely that anyone would reject it, but in spite of the opposition to the word ‘Gurunsi’, no equivalent has yet been proposed that would justify its abolition.”

In summary, while “Gur” and its related terms currently serve as useful genetic clades for linguistic and anthropological research, the recent calls for their abolition by a segment of native-speaker linguists merit serious consideration. Broader consultation could lead to the adoption of a globally acceptable label, which would not only enhance research on individual “Gur” languages but also facilitate their easy inclusion in typological and cross-linguistic studies.

香港大學圖書館 HKU Libraries

1.5 Language contact and multilingualism

Buli exists within a complex multilingual environment shaped by historical, social, and geographical factors. In Buluk, Buli is the dominant language, spoken daily in homes and serving as a primary medium of communication at social functions such as funerals and festivals.

The Bulisa maintain strong ties with neighbouring communities in northern Ghana, though the extent to which individuals acquire neighbouring languages – or their proficiency levels – varies depending on geographic proximity and family relationships. For instance, Mampruli is commonly spoken among some Bulisa due to the long-standing presence of Mamprusi families in the Buluk area. Similarly, some Bulisa living in Chuchuliga, a town closer to the Kasena community of Chana, speak Kasim. This linguistic influence is reinforced by politico-administrative boundaries and the close ties between Chuchuliga and Chana. The Chuchuliga-Buli speakers, forming a minority group, often feel a sense of solidarity, as their dialect is considered 'inferior' to the Wiaga and Sandema varieties. In response to this marginalised status, the Bulisa of Chuchuliga have occasionally threatened to break away from the broader Buluk community to align with the Kasena, with whom they share cordial relations (cf. Awedoba 2006). This prolonged contact with the Kasena community suggests that the Chuchuliga-Buli variety may have been influenced by Kasim, and a significant number of Bulisa in the area may have acquired Kasim at varying proficiency levels. Additionally, intermarriage with neighbouring ethnic groups in northern Ghana is very common, further facilitating the acquisition of other Gur languages.

Buli has also been in contact with linguistically distant languages, particularly Akan and English. Its contact with Akan dates back to the pre-colonial era, when slave raids and British imperialism dominated much of Ghana. Migration to urban centres like Kumasi and Accra for economic opportunities, education, and family reunification has led to the

香港大學圖書館 HKU Libraries

establishment of Bulisa settlements across Ghana, where individuals have acquired the languages of their new environments. The Asante-Twi dialect of Akan holds significant economic prestige among the Bulisa, as it functions as the indigenous lingua franca for trade and business across Ghana. Today, many Bulisa speak Asante-Twi as a first or second language.

Contact between Buli and English likely dates back to colonial times, as many Bulisa would have worked as labourers in the coastal cities of Ghana, where enslaved people from various regions were also employed. Bulisa labourers must have spoken a form of Ghanaian Pidgin English with other enslaved individuals. Additionally, English, Ghana's sole official language since independence in 1957, has influenced Buli to the present day due to its central role in education, business, law, politics, and governance. Many Bulisa encounter English through formal education and speak a Ghanaian variety. The global prestige of English has led to the borrowing of English vocabulary into Buli, and it is common to find Bulisa with little or no formal education using English expressions as markers of education and social status.

Buli has further been influenced by Hausa, a regional language spoken widely in Nigeria and other parts of West Africa. Hausa-speaking communities have existed in Buluk and other parts of Ghana for decades. Bulisa migrants settling in these communities for trade and other activities have facilitated the borrowing of Hausa words into Buli. Additionally, Arabic terms and expressions have entered Buli through the study of the Quran and other Islamic texts.

In summary, a typical Bùlɔ̀ (Buli speaker) is likely to acquire English and Akan, and depending on their individual circumstances, may also speak Hausa and/or another Gur language. This multilingualism reflects the dynamic interplay of historical, social, and geographic factors shaping the linguistic landscape of the Bulisa people.

香港大學圖書館 HKU Libraries

1.6 Data collection and consultants

The data for this study was drawn from a diverse corpus of texts, including narratives, conversations, ceremonial speeches, procedural texts, casual interviews, observations, and elicitations, which I collected during community-based research conducted in Sandema, Ghana, between July 2020 and May 2023.

This research began with an initial eight-week visit to Sandema from February to March 2020, where I immersed myself in the Buli community to gather data for my PhD studies. During this period, I was hosted by Atiim Francis, a university graduate and teacher at Sandema Secondary School, who also served as my main consultant. Atiim assisted in recruiting three elderly consultants, who shared insights into Buli history, customs, and practices. These sessions, which included stories about slave raids and marriage rites, were recorded using a Sony UX560 audio recorder. Additionally, Atiim facilitated meetings with other consultants, from whom I recorded: (a) procedural texts on the cooking processes of *sāāb* and *wɔ̄gtā*, two traditional local dishes; (b) daily home conversations; and (c) directions and location descriptions. Some of the data, particularly in category (c), was elicited through simple instructions and demonstrations I provided. Fragmentary written notes were also taken during these sessions. To capture specific construction types with low occurrence in spontaneous speech, such as reflexive constructions, I employed various elicitation tools, including self-designed or modified ones. With Atiim's assistance, I transcribed a portion of the data, purposefully selecting texts based on their type and topic.

My second visit, from June to July 2020, coincided with a national lockdown due to the COVID-19 pandemic, making regular meetings for data collection particularly challenging. Nevertheless, Atiim helped gather pre-recorded texts, including a speech on COVID-19, radio interviews on social issues, and a political talk show. I transcribed part of this data and combined it with the transcriptions from my first visit. Between January 2021

香港大學圖書館 HKU Libraries

and December 2023, I did not return to Sandema, as I had already collected sufficient data. However, I maintained contact with my primary consultants during the thesis writing process in Hong Kong. Through Zoom, I sought clarifications on aspects of the transcribed data. Table 2 provides basic biographical information on my primary consultants.

Table 2: Primary consultants

Name	Birthplace	Age	Profession	Languages spoken
Francis Atiim A.	Siniensi	Mid 30s	Teacher	Buli, Twi, English
Augustine Ajibisa	Chuchuliga	Early 40s	Teacher	Buli,Hausa, English
Francis Anagouk	Wiaga	Late 30s	Teacher	Buli, English
Elijah Amoak	Siniensi	Mid 40s	Teacher	Buli, English
Felix Apochaab	Siniensi	Mid 50s	Teacher	Buli, English
Jerry Atiimbiik	Sandema	Early 40s	Mason	Buli, Hausa, English
Linda Adocta	Kanjaga	Early 30s	Trader	Buli, English
Francis Agilinko	Siniensi	Early 50s	Teacher	Buli, Twi, English
Jonas Atigaasa	Chuchuliga	Early 40s	Farmer	Buli, English
Timoty Azonbiik	Siniensi	Mid 40s	Farmer	Buli
Asiagoa Ayompok	Siniensi	Late 50s	Farmer	Buli
Jacob A. Awonanyami	Wiaga	Mid 20s	Student	Buli, Twi, French
Aniak Awongaamtiim	Kanjaga	Late 90s	Unemployed	Buli, Twi
Kwame Ajuik	Kadema	Late 40s	Mechanic	Buli, English, Hausa
John Awiaka	Gbedema	Mid 60s	Unemployed	Buli, Twi
Janet Adabea	Kadema	Late 20s	Student	Buli, Twi

香港大學圖書館 HKU Libraries

1.7 Orthographic conventions

A local alphabet system does not exist for Buli; however, a conventional orthographic system based on the Latin script is used. Table 3 presents the orthographic symbols alongside their corresponding IPA notations. The first column lists the IPA notations for the orthographic symbols, while the second column provides alternative graphemes found in some written texts. A few adjustments have been made to the orthographic system in this thesis to ensure consistency and readability. Except in Chapter 2, the phonology chapter, the orthographic representation is primarily used throughout the rest of this thesis.

Table 3: Orthographic representation of consonants

IPA notation	Orthographic symbol	Elsewhere
p	<p>	
b	<b>	
t	<t>	
d	<d>	
k	<k>	
g	<g>	
k͡p	<kp>	
g͡b	<gb>	
ʧ	<ch>	<ky>
ʤ	<j>	<gy>
f	<f>	
v	<v>	
s	<s>	
z	<z>	
l	<l>	
*r	<r>	
m	<m>	
n	<n>	
ɲ	<ny>	
ŋ	<ŋ>	<ng>
ŋ͡m	<ŋm>	<ngm>
j	<y>	
w	<w>	

香港大學圖書館 HKU Libraries

There are a few issues worth noting regarding the orthographic representation of phonetic symbols in Buli literature. First, two orthographic symbols have been used to represent a single phonetic notation. This issue pertains to the affricates [ʧ] and [ʤ], as illustrated in Table 2. Recently, the symbols <ch> for [ʧ] and <j> for [ʤ] have been adopted for academic, official, and literacy purposes, and I follow this convention. A related issue is that while the voiced alveolar affricate [ʤ] is represented orthographically as <j>, the palatal approximant [j] is represented as <y>. I adhere to this convention as well. As for the labio-velar [ŋ͡m], I represent it orthographically as <ŋm>. This is because <ŋm> already corresponds transparently with the phonetic notation [ŋ͡m]. The symbol <ngm> is more complex and can create ambiguity, as the n-g succession also exists. Since ligatures are not used in Buli orthography, I represent the co-articulated sounds [k͡p], [g͡b], and [ŋ͡m] as <kp>, <gb>, and <ŋm>, respectively.

The representation of vowels orthographically is also quite cumbersome and requires clarification. Table 4 lists the vowels and their orthographic representations.

Table 4: Orthographic representation of vowels

Phonetic notation	Orthographic symbol	Elsewhere
i	<i>	<i>, <e>
e	<e>	<e>, <ɛ>
ɛ	<ɛ>	
u	<u>	<u>
o	<o>	<o>
ɔ	<ɔ>	<o>, <oa>
a	<a>	<a>

The most common confusion pertains to the representation of [i] as <e>. Since the phonemes /i/ and /e/ are highly contrastive (e.g. *lī* 'FOC/SUB' vs. *lē* 'insult', *pī* 'ten' vs. *pē* 'swear'), I represent them separately as <i> and <e>. Additionally, I maintain the distinction between [e] and [ɛ], and [o] and [ɔ] by representing each of them separately as <e>, <ɛ>, <o>, and <ɔ>.

香港大學圖書館 HKU Libraries

Another issue pertains to how diphthongised vowels, especially [ɔ], are represented in certain contexts. In its regular context, [ɔ] is represented by <ɔ> (e.g. *kɔ̀* 'father', *kɔ̀k* 'ghost') – and by <ɔɔ> if lengthened (e.g. *kɔ̀ɔ̀k* 'hundred'). However, due to diphthongisation, [ɔ] is represented differently in Buli spelling: <wa> for class 1 pronoun [ɔ], but <o> or <oa> for nouns (e.g. *dɔ̄ ~ dɔ̄ā* for [dɔ̄] 'friend', *mɔ̄ ~ mɔ̄ā* for [mɔ̄] 'sibling' (sp.), *yɔ̄ ~ yɔ̄ā* for [jɔ̄] 'sibling' (sp.), and **bɔ̀* ~ *bɔ̀à* [bɔ̀] 'what'). Considering that [ɔ] is represented as <wa>, a consistent spelling of these nominals would be <dwa> 'friend', <mwa> 'sibling' (sp.), <ywa> 'sibling' (sp.), and <bwa> 'what'. However, CwV spelling is dispreferred in Buli orthography, which has led to the existence of <oa>, <o> and <wa>. I maintain the spelling <wa> for the pronoun *ɔ̀* [wa] as it is often heard in speech (and frequently represented orthographically). I use both the CV spelling (e.g. *dɔ̄* friend', *dɔ̄* 'sibling' (sp.), and *yɔ̄* 'sibling' (sp.)), and the CVV spellings (i.e. *bɔ̀à* 'what', not **bɔ̀*) as they appear in my corpus. Many verbs (e.g. *dɔ̄ā* [dwā]'lie down', *sɔ̄ā* [swā] 'own', and *gɔ̄ā* [gwā] 'sleep') have no CV spellings (i.e. **dɔ̄,* **sɔ̄,* **gɔ̄*) in Buli orthography.

Long vowels have been represented differently and inconsistently in the orthography due to frequent diphthongisation. For example, [u:], [o:], and [e:] are sometimes represented as <ui>, <uo>, and <ie>, although <uu>, <oo>, and <ee> also exist. I follow the most widely used spellings for various words. The issue of lengthening and diphthongisation has been explained in Section 2.1.3.

The adjustments in this work are aimed at minimizing the difference between the convention here and the widely accepted convention. These, I hope, will make the thesis more accessible and user-friendly to Bulisa readers and readers familiar with the orthographies of other Ghanaian languages

香港大學圖書館 HKU Libraries

1.8 Previous studies on Buli

Based on Hammarström's (2018) assessment of grammatical descriptions on African languages, there are only a few long grammars on Gur languages. There are nonetheless useful wordlists, texts, and dictionaries on a few several Gur languages. Dagaare seem to have benefitted from linguistic the most and contributed to various linguistic theories (e.g. generative, systemic functional grammar, typological linguistics), with native scholars' contribution to Dagaare scholarship dating back to the 1950s (see Mwinlaaru 2017: 10–13). Some of Buli's close relatives (e.g. Kɔnni, Dagbani, Gurenɛ, Kusaal, Likpakpaln) have also attracted linguists' attention over the past few decades. In the following paragraphs, I will review the chronological development of linguistic and non-linguistic studies on the Bulisa and Buli, fleshing out the trajectory that has contributed to the present state of Buli linguistics.

As with many indigenous languages of West Africa, Buli has its earliest written words appearing in reports, diaries, notes, worldlists, etc. of European travellers, colonisers, missionaries, and traders. Kröger (1992: vii) surmises that Buli words appeared in written form around the mid-nineteenth century in Clarke (1848) and Koelle (1854) which list a few basic vocabularies, including Buluk towns and villages like *Kandsare* (for Kanjaga), *Fumbisi* (or *Simbisa)*, Donen (for Doninga), *Sinesa* (for Siniensi), *Wiesi* (or *Wiasa*) etc. Some Buli words in these works must have gone unnoticed due to misspellings during the initial encounters. Later studies, such Migeod (1911) and Tauxier (1912; 1924) provide brief notes on Buli and its speakers, erroneously referring to the Bulisa or their language as 'Kanjaga/Kanjarga', or *bouras*. Following these works was Westermann's (1913a; 1914) seminal comparative work which states Buli as 'Kanjaga'. Kröger (1992) reports on other ethnographic studies that describe Bulisa society under erroneous demonyms like *kanoyaga*, *bura,* and *boulsi*. Notable among these studies is Armitage (1924) which describes Bulisa facial scarification and Rattray

香港大學圖書館 HKU Libraries

(1932) which considers and other ethnic groups (e.g. Farefare, Kusaasi) as part of "tribes of the Ashanti hinterland". Around the same period, Buli words appeared in wordlists of African languages collected from slaves in America (see, for example, (see, for example, Rodrigues 1935) for wordlist collected in Brazil).

Following these studies were two manuscripts about depopulation in the Sisili area (1947; 1948), of which the author makes reference to two Buluk villages, viz., Vare (now extinct) and Sinyensi (presently a subdivision of Sandema). Manoukian (1951) included the Bulisa in her ethnographic survey of ethnic societies in the northern Ghana (then Northern territory of Gold Coast). A similar ethnographic survey, Goody (1954), included the Bulisa area. Later, Köhler (1958), from a historical perspective, investigated the Bulisa and observed that some Bulisa are Talensi immigrants who settled in Buluk in the early days. Around the same period, attempts were made by some interest groups and institutions to produce Buli pedagogical materials to encourage the teaching and learning of the language. For example, Buli primers were produced by Navrongo Training College in 1953.

After Ghana's independence in 1957, more extensive engagements with the Bulisa and their language followed for various reasons – including European Christian missionary activities. Several comparative studies, which emerged in the 1960s, gave attention to Buli and languages its relatives. Prominent among them was the genetic classification of Gur languages by the anthropologist John Bendor-Samuel (cf. Bendor-Samuel 1965) who later founded a Bible institute (Ghana Institute of Linguistics, Literacy and Bible Translation, GILLBT). GILLBT produced various Buli religious texts and literacy and translated some sacred religious texts, including the Bible, into Buli. Two prominent Christian denominations (Catholic and Presbyterian churches), as well as the British and Foreign Bible Society undertook similar evangelistic activities, producing various religious texts in Buli (e.g. hymn,

香港大學圖書館 HKU Libraries

books and chapters of the Bible etc.). Buli later featured in the comparative works (e.g. Swadesh et al. 1966; Manessy 1975; 1979; Naden 1988; 1989).

In the following years, studies on the Bulisa and their language were much more detailed and dominated by two German anthropologists, namely Schott Rudiger and Franz Kröger. Their ethnographic work (e.g. Schott 1977; Schott & Kröger 1982; Schott 1988; Schott 1993; Schott 1996; Kröger 1982; Kröger 2001; Kröger 2003) mainly covered Bulisa history, as well as customs and traditions (e.g. kinship, proverbs, storytelling, artefacts, libation, ancestor worship, marriage, rites of passage, pottery, farming, blacksmithing, healing, law, taboo). In 1972, the first (French-English) Buli dictionary was produced (cf. Mélançon & Prost 1972), followed by a grammatical sketch in 1974 (cf. Mélançon, Coutu & Prost 1974). Later, Franz Kröger produced a more comprehensive (Buli-English) dictionary (cf. Kröger 1992). The work of Schott and Kroger put the limelight of international scholarship on the Buli society. In Germany where the bulk of anthropological research on the Bulisa have come from, Bulisa cultural artefacts have been considered for major museum studies. Research work about the Bulisa have subsequently progressed steadily, with more recent studies about their history of enslavement (e.g. Saboro 2014; 2017; 2021; 2022) and social systems (e.g. Apentiik 2003) carried out.

The earliest mainstream linguistic analyses of Buli are preliminary investigation which yielded manuscripts that provided the impetus for further investigations (see Dakubu (1973) for a sociolinguistic survey of Buluk, Gray (1978) for Buli noun classes, Poulter (1989) for basic Buli phonology, and Akanlig-Pare 1988 for basic Buli phonology). Akanlig-Pare (1994) is a relatively detailed study on Buli phonology, followed by the same author's investigations into Buli phonology within the autosegmental framework and other formalist theories (see, for example, Akanlig-Pare 2005). Buli linguistics has been funded by several universities, locally and internationally. Two of these funded projects are the Legon-Trondheim Linguistics Project

香港大學圖書館 HKU Libraries

(collaborative research by the University of Ghana and the Norwegian University of Science and Technology) and MIT Working Papers in Linguistics [**MPEL04**] **(**Massachusetts Institute of Technology). These projects are preliminary investigations into aspects of Buli grammar, especially phonology and morpho-syntax (e.g. tone, adjectives, reflexive constructions, and serial verbs constructions) (see Kenstowicz & Akanlig-Pare 2003). Anne Schwarz has explored the tone system, nominal system, and verbal system of Buli in some detail, sometimes examining Buli from a comparative Gur perspective (see, for example, Schwarz 2005; 2009; Schwarz & Fiedler 2007). More recent research on Buli include Sulemana (Sulemana 2019; 2021), conducted within the Chomskyan generativist tradition, and Adjong (2018) which describes aspects of the Buli verb system. Buli is increasingly finding pride of place in typological studies, from both generativists' and functionalists' perspectives (e.g. Cyffer 2009; Hiraiwa et al. 2017).

香港大學圖書館 HKU Libraries

1.9 Motivation for this study

As demonstrated in 1.8, Buli studies have benefited from the efforts of early missionaries and later from mainstream linguistic studies. Various aspects of phonology, noun class systems, tense, aspect, mood, negation systems, and information structures covered in this work have been explored in depth in previous studies. In particular, Schwarz (2005), written entirely in German, shares similarities with this thesis. These studies have laid the foundation for the first comprehensive grammar attempt, encompassing all topics that a traditional grammar would cover. However, the treatment of these topics in this study differs significantly in terms of depth, analysis, and descriptive interpretation of the data.

For instance, the noun class system has been extensively examined from a comparative-Gur perspective, with sufficient supporting data parsed and glossed to demonstrate the morphological classes and agreement patterns in the nominal domain. This approach has helped trace the evolution of Buli noun classes and unveil insights about the Gur, which will be beneficial for future studies on individual languages within the family and the family as a whole.

Similarly, to establish a solid foundation for understanding this grammar, a detailed phonological description of Buli is presented in this work, covering the sound inventory, syllable structure, phonotactics, phonological processes, tone, and adaptation of loanwords for a refined understanding of the phonological system. The contentious complex vowel system has been analysed as a seven-vowel system in this thesis.

One of the strengths of this thesis is its reliance on spontaneous, naturally occurring texts used in real communication contexts. This approach ensures that grammatical elements like adverbial modifiers in Section 4.7 and other discourse elements, which might be absent in elicited or introspectively constructed data, are adequately covered. Major categories such as ideophones and interjections are prominently featured in this work.

香港大學圖書館 HKU Libraries

While previous descriptive studies have focused mainly on aspects of morpho-syntax within nominal and verbal domains, this study delves into various types of complex constructions, demonstrating their formal properties and functional types as typically found in comprehensive grammars. Chapters 7, 8, 9, and 10 cover issues that have not been addressed in Buli linguistics, shedding light on new facets of the language and providing a deeper understanding of certain grammatical elements by revealing their broader functions beyond elicited data.

For a language that has only recently attracted detailed linguistic studies, the question of whether it has been previously described or analysed holds less importance compared to the quality of work done on the language. This work, while not claiming to offer a flawless depiction of Buli without limitations, seeks to inspire further research on this intriguing language. By engaging more with Buli, linguists, professionals seeking pedagogical insights, and even laypeople aiming for a basic understanding of the language could benefit from ongoing Buli research. This thesis, I hope, will partially meet these needs.

香港大學圖書館 HKU Libraries

1.10 Significance of the thesis

This thesis is written to serve a diverse audience, including linguistics experts, the Bulisa community, and individuals interested in learning about Buli or using it for educational purposes. To make the content accessible, language terminologies are kept as non-technical as possible, though this approach could not be maintained consistently throughout the thesis. The thesis incorporates extensive historical and socio-cultural notes, offering insights into Bulisa's way of life. As a result, it serves as a useful resource not only for academics but also for laypersons who wish to learn about the linguistic beauty, cultural richness, and heritage of Buli and its speakers. The thesis also includes numerous comparative remarks on closely related Gur languages and beyond, making it a valuable resource for linguists and scholars engaged in individual Gur language studies, Gur comparative research, and linguistic typology. While the thesis does not aim to test the totality of theoretical assumptions, it acknowledges the significant contributions of Buli and its related languages to formalist theories and broader theoretical achievements. Instead of adopting a specific theoretical bias, the work is grounded in an empirical approach, providing rich communicative data within their relevant (extra-)linguistic contexts. This ensures that the description of Buli remains a timeless resource that can meaningfully contribute to evolving theoretical frameworks, even as they change or become obsolete. Overall, this thesis contributes to an understanding of human language by revealing some of the continuities and variations found in less familiar languages.

香港大學圖書館 HKU Libraries

2 Phonology

This chapter describes aspects of Buli phonology. Attention is given to the inventories and phonotactics of consonants and vowels, the syllable structure, tone, and phonological processes such as elision, assimilation, and lengthening. These aspects of phonology show how segmental and suprasegmental features interact.

The chapter proceeds as follows. Section 2.1 provides an overview of Buli sound system, focusing on the inventories, distribution, and phonemic properties of consonants and vowels. Section 2.2 discusses the syllable, describing the types (§ 2.2.1), template of the types (§ 2.2.2), and constraints on consonants in a syllable (§ 2.2.3). Section 2.3 covers phonological processes that affect consonants and vowels (e.g. vowel lengthening, diphthongisation, hiatus resolution, vowel harmony, vowel insertion and elision, vowel nasalisation, consonant deletion, and devoicing of consonants). Section 2.4 describes the tone system, covering the inventory, structure, and function of tone (§ 2.4.1) and tonal processes (§ 2.4.2). Section 2.5 discusses the adaptation of loanwords into Buli. Section 2.6 presents the chapter conclusion.

香港大學圖書館 HKU Libraries

2.1 Buli sound system

2.1.1 Consonant inventory and properties

Buli has an inventory of twenty-four consonants, as presented in Table 5. These consonants are contrastive in seven places of articulation and six manners of articulation. There are three co-articulated consonants: the labio-velar plosives /k͡p/ and /g͡b/ and labio-velar nasal /ŋ͡m/.

Obstruents show voicing contrast, occurring in voiced–voiceless pairs. The approximants in the last row (i.e. *j* and *w*) are consonants, but they exhibit vowel properties in certain phonological contexts. Each of the consonants has a phonemic contrast with at least one or more of the other consonants.

Table 5: Consonant inventory

	Bilabial	Labio-dental	Alveolar	Palatal	Velar	Labio-velar	Glottal
Plosive	p b		t d		k g	k͡p g͡b	(h)
Affricate				tʃ, dʒ			
Fricative		f v	s z				
Liquid			l (r)				
Nasal	m		n	ɲ	ŋ	ŋ͡m	
Approximant				j		w	

香港大學圖書館 HKU Libraries

2.1.2 Distribution and phonemic properties of consonants

This section discusses the occurrence of the various consonant classes in words and the meaning contrasts associated with them.

2.1.2.1 Nasals: /m, n, ɲ, ŋ, ŋ͡m/

Following are the five nasal consonants and examples for each.

(1) Nasal phonemes

/m/	*mí:k*	‘rope’
	lām	‘child’,
	māūk	‘catapult’
	pámí	‘debt’
	kɔ́m	‘hunger’
/n/	*níŋ*	‘front’
	wén	‘god’
	gānī	‘to fence’
	tān	‘stone’
	nārī	‘to wash’
/ɲ/	*ɲū*	‘to drink’
	wàŋ̀nī	‘one’
	ɲɔ̄nā	‘owner’
	ɲíám	‘water’
	ɲūm	‘smell’
/ŋ/	*ŋɔ̄bī*	‘chew’
	ŋò:ŋ	‘mouse’
	g͡bíŋ	‘knot’
	fíŋ	‘cane’
	k͡pɔ́ŋ	‘guinea fowl’

香港大學圖書館 HKU Libraries

/ŋm͡/ *ŋ͡mārī* ‘to break a piece’

ŋ͡mā ‘to blame’

ŋ͡màì ‘top/up’

ŋ͡mē ‘to pinch’

ŋ͡mɔ̀rùk ‘rain

Each nasal phoneme occurs in contrastive distribution with other consonants. Table 6 below shows the contrast that nasal consonants show with other consonants. The first word in each column of the table exemplifies the occurrence of a nasal phoneme in a word. When the word-initial nasal consonant is substituted with another consonant, this creates a change in meaning.

Table 6: Phonemic contrast between nasals and other consonants

/m/	/n/	/ɲ/	/ŋ/	/ŋ͡m/
mí:k ‘rope’	*níŋ* ‘front’	*ɲū* ‘to drink’	*ŋɔ̄bī* ‘to chew’	*ŋ͡mārī* ‘to break’
bí:k ‘child’	*ɲīŋ* ‘skin’	*gū* ‘to bury’	*mɔ̄bī* ‘to break’	*nārī* ‘to wash’
fí:k ‘small’	*sīŋ* ‘to descend’	*ŋū* ‘to smoke’	*kɔ̄bī* ‘bone’	*ŋārī* ‘to fetch’
ʧí:k ‘moon’	*líŋ* ‘initially’	*bū* ‘to eat (sp.)’	*bɔ̄bī* ‘to tie’	*dārī* ‘to drag’
wí:k ‘whistle’	*mīŋ* ‘to know’	*lū* ‘to pierce’	*pɔ̄bī* ‘to wrap’	*tārī* ‘to reserve’

In addition to occurring in the onset or coda position of a syllable, the bilabial nasal and the alveolar nasal can occur independently as a syllable. A syllabic nasal always bears a tone. Homorganic assimilation occurs between these nasals and the following consonant. The nasals, in this case, are in complementary distributions and occur as phonological variants. This is illustrated with the first-person singular pronoun *m̀* and the enumeration marker *ǹ* below.

香港大學圖書館 HKU Libraries

(2) Syllabic nasals

1st person singular pronoun/Possessive pronoun *m̀*

[ŋ]	*ŋ̀-gōgō*	‘my watch’
	ŋ̀-kālī	‘I should sit’
[m]	*m̀-bū:k*	‘my goat’
	m̀-pōm	‘I should shave’
[ŋ]	*ŋ̀-gōgō*	‘my watch’
	ŋ̀-kālī	‘I should sit’
[ɲ]	*ɲ̀-ɲām*	‘my owner’
	ɲ̀-ɲā	‘I should see’
[n]	*ǹ-dɔ̀k*	‘my room’
	ǹ-dā	‘I should buy’

Enumeration marker *ǹ*

[n]	*ǹ-tà*	‘three’
[ɲ]	*ɲ̀-jùèbì*	‘six’

香港大學圖書館 HKU Libraries

2.1.2.2 Plosives: p/b, t/d, k/g, k͡p/g͡b

Buli has eight plosives that occur in voiceless–voiced pairs, show similar distributions, and contrast with each other and with other consonants. The bilabial and velar plosives /p, b, k, g/ occur in syllable initial and final positions. The alveolar and labio-velar plosives /t, d, k͡p, g͡b/ occur in syllable-initial position but not syllable-final position. Example (3) shows the contrast between /p/ and /b/.

(3) Bilabial plosives

/p/		/b/	
pē	'to swear'	*bē*	'to ripen'
pɔ̄bī	'to tie with a rope'	*bɔ̄bī*	'to tie with a rope'
pū:k	'belly'	*bū:k*	'goat'
pū:rī	'to wash face'	*bū:rī*	'pumpkin'
pīērī	'to blow flute'	*bīērī*	'to ladle out'

Each of the two bilabial plosives also show contrast with a range of other consonant phonemes (4). The first example in each set of words has a bilabial plosive in word-initial position. By substituting the word-initial bilabial plosive with other consonants, new words are created. The voiced bilabial plosive /b/ occurs in word-final position where it is often devoiced (§ 2.3.6).

香港大學圖書館 HKU Libraries

(4) Phonemic contrast between bilabial plosives and other consonants

Contrast between /p/ and /b, v, ŋ, w/

pārī ‘to take’

bārī ‘to trap’

vārī ‘to snatch’

ŋārī ‘to fetch’

dārī ‘to drag’

Contrast between /b/ and /d, ŋ, s/

bírī ‘seed’

dírī ‘forehead’

ŋírī ‘neck’

sírī ‘bee/broom’

香港大學圖書館 HKU Libraries

Alveolar plosives t/d

The alveolar plosives /t/ and /d/ only occur in syllable-initial position. Example (5) is a list of words that shows the distribution of the two alveolar plosives.

(5) Distribution of /t/ and /d/

/t/		/d/	
tɛ̄ŋ	'land'	*dō*	'to ride'
tɛ̄	'to give'	*dɛ̄*	'to eat'
tōm	'to send'	*dōm*	'to bite'
tūēm	'disease'	*dɔ̀k*	'room'
tārī	'to reserve'	*dārī*	'to pull'

As shown in (5) /t/ and /d/ occur word-initially. The minimal pairs *tōm* 'to send' vs. *dōm* 'to bite' and *tārī* 'to reserve' vs. *dārī* 'to pull' show that the two sounds are in contrastive distribution. Also, /t/ and /d/ are in contrastive distribution with other consonants (6).

(6) Phonemic contrast between /t/, /d/, and other consonants

tɛ̄	'to give'
dɛ̄	'to eat'
ʧɛ̄	'to cut'
ɲɛ̄	'to do'

Velar plosives k/g

The velar plosives /k/ and /g/ have a wider distribution than alveolar plosives which usually do not occur in coda position. Example (7) shows the distribution of /k/ and /g/ in contrast with other consonants.

香港大學圖書館 HKU Libraries

(7) Distribution of /k/ and /g/ in contrast with /b, p, m/

kā:rī	‘to scream’
gā:rī	‘to take a portion’
bā:rī	‘to caress’
pā:rī	‘to reach’
mā:rī	‘to help’

/k/ and /g/ are contrastive with each other, as in *kā:rī* ‘to scream’ and *gā:rī* ‘to take a portion’. Each of the two plosives is also in contrastive distribution with other consonants, as seen in the examples. The voiced plosive sometimes occurs word-finally after a vowel is deleted. In this environment, /g/ is often devoiced (§ 2.3.6).

香港大學圖書館 HKU Libraries

Labio-velar plosives k͡p/g͡b

Labio-velar plosives occur mostly in word-initial position. Neither the voiceless labio-velar plosive nor the voiced labio-velar plosive occurs in word-final position. The distribution of labio-velar plosives is illustrated in (8).

(8) Contrast between /k͡p/ and /g͡b/

/k͡p/		/g͡b/	
k͡píŋ	'orphan'	*g͡bíŋ*	'knot'
k͡pīērī	'be fruitless'	*g͡bīērī*	'to joke'
k͡pēsī	'be attentive'	*g͡bēsī*	'to pluck
k͡pērī	'to overwhelm'	*g͡bērī*	'to copulate'
k͡pītī	'to dig out'	*g͡bītī*	'to dip head into water'

Each row of the word sets contains a minimal pair (e.g. *k͡píŋ* 'an orphan' vs. *g͡bíŋ* 'a knot', etc.) This is an indication that /k͡p/ and /g͡b/ are contrastive in distribution. Each of the labio-velar plosives is also contrastive in distribution with other consonants (9).

香港大學圖書館 HKU Libraries

(9) Phonemic contrast between velar plosives and other consonants

Contrast between /k͡p/ and /g, k, p, b/

k͡pā	‘to eat’
gā	‘to eat (sp.)’
kā	‘to swear’
tā	‘to have’
pā	‘to take’

2.1.2.3 Affricates: ʧ/ʤ

Affricates mostly occur in word-initial position. Affricates do not occur in word or syllable-final position. As illustrated in (10), /ʧ/ and /ʤ/ show contrast with each other.

(10) Phonemic contrast between /ʧ/ and /ʤ/

ʧē	‘to cut’	*ʤē*	‘to fight’
ʧī	‘to wait’	*ʤī*	‘to carry’
ʧú:k	‘soap’	*ʤū:k*	‘tail’
ʧā:b	‘each other’	*ʤā:b*	‘something’
ʧúm	‘tomorrow’	*ʤúm*	‘fish’

香港大學圖書館 HKU Libraries

/ʧ/ and /ʤ/ also occur in contrastive distribution with other consonants.

(11) Phonemic contrast between affricates and other consonants

Contrast between /ʧ/, /ʤ/, and /t, f, s, v/

ʧā:rī ‘to defecate’
ʤā:rī ‘to fix’
tā:rī ‘to exchange’
fā:rī ‘to marry’
sā:rī ‘to take all’
vā:rī ‘to sweep’

2.1.2.4 Fricatives: f/v, s/z,

Labiodental fricatives: f/v

The two labiodental fricatives, /f/ and /v/, occur in contrastive distribution with each other. Example (12) lists minimal pairs showing the meaning differences that /f/ and /v/ create.

(12) Phonemic contrast between /f/ and /v/

/f/		/v/	
fā:rī	‘to marry’	*vā:rī*	‘to sweep’
fūgī	‘to fan’	*vūgī*	‘to cover’
fū:rī	‘millet cake’	*vū:rī*	‘to drag’
fī:rī	‘to bruise’	*vī:rī*	‘to starve’

香港大學圖書館 HKU Libraries

As shown in (13) the two labiodental fricatives also contrasts in distribution with other consonants.

(13) Phonemic contrast between labiodental fricatives and other consonants

Contrast between /f/, /v/ and /p, b, m/

fā:rī ‘to marry’
vā:rī ‘to sweep’
pā:rī ‘to arrive’
bā:rī ‘to sew’
mā:rī ‘to help’

Alveolar fricatives: s/z

Each of these alveolar fricatives occurs in word-initial position. They rarely occur word-medially and word-finally, except that /s/ is occasionally found word-finally due to the omission of /i/ in the final position of some verbs (e.g. *bās* ~ *bāsī* ‘to leave’, *gīs* ~ *gīsī* ‘to search’). In word-initial position, /s/ and /z/ are contrastive.

(14) Phonemic contrast between /s/ and /z/

/s/		/z/	
sē	‘to build’	*zē*	‘to be ignorant’
sū	‘to wear’	*zū*	‘to steal’.
sā	‘to smear’	*zā*	‘to be in a standing position’
sārī	‘female (sp.)’	*zārī*	‘placenta’

香港大學圖書館 HKU Libraries

As shown in (15), the two alveolar fricatives are in contrastive distribution with other consonants

(15) Phonemic contrast between alveolar fricatives and other consonants

Contrast between /s/, /z/, and /*f, w, ʧ*/

sē	'to urinate'
zē	'to drive'
fē	'meat/to taste'
wē	'sense'
ʧē	'cut'

2.1.2.5 Liquids /l, r/

The liquid /l/ usually occurs in the initial and medial positions of words. In syllables, it typically appears initially or as the second element in the Onset of a consonant cluster. In terms of distribution, /l/ is most commonly found in the initial or medial position of words. Example (16) illustrates the occurrence of /l/ in both word-initial and word-medial positions. Following the examples are words that show the contrast between /l/ and other consonants.

(16) Distribution of /l/ in words

Word initial /l/		**Word medial /l/**	
lām	'meat'	*tālīm*	'farm'
lɔ́k	'pocket'	*bɔ̀glūk*	'shrine'
līgrī	'money'	*wālīk*	'antelope'
lābī	'to share'	*lālīk*	'bull'
lō	'to fall'	*būlūk*	'armpit'

香港大學圖書館 HKU Libraries

Contrast between /l/ and /d, t, p/

lē ‘to insult’
dē ‘to eat’
tē ‘to give’
pē ‘to swear’

The liquid /r/ has a precarious character, being the only consonant that never occurs word-initially and sometimes appearing as an allophone (realised as a tap [ɾ]) of /d/ intervocalically and between a plosive (particularly /g/ or /b/) and a vowel. It is also realised as a trill [r] word-finally, especially in ideophones (cf. Akanlig-Pare 2005). The phonetic realisation of the liquid requires acoustic investigation to determine its exact character. The examples (17) illustrate the distribution of /r/ and its contrast with other consonants.

(17) Occurrence of /r/ intervocalically and word-finally

Intervocalically

dírí ‘forehead’
núrí ‘person’
bārī ‘to trap’
ŋārī ‘to fetch’

tìr ‘IDEO’ (never!)
mír ‘IDEO’ (to move speedily)

Contrast between /r/ and /s, n, g/

tūrī ‘ear’
tūsī ‘to push’
tūnī ‘to pay’
tūgī ‘to collect water’ (sp.)

香港大學圖書館 HKU Libraries

2.1.2.6 Approximants: /j, w/

The approximants /j, w/ occur in word-initial position. The voiced palatal approximant /j/ occurs word-initially, and in the medial-position of complex words (e.g. *vàjààm* 'medicine'(sp.)) and some loanwords (e.g. *pájà*[3] 'avocado') (18). /j/ does not occur in the final position of words, but it may be heard utterance-finally after vowel deletion (e.g. [kòj] → *kò* 'dried' + *yá* 'PRF')

(18) Distribution of /j/ in words

Word initial /j/		**Word medial /j/**	
jām	'sense'	*vàjà:m*	'medicine' (sp.)
jérí	'house'	*pájà*	'avocado'
jī	'to wear'		
jālī	'to marry'		
jāūk	'elephant'		

The labial-velar approximant /w/ occurs in word-initial position (19).

(19)
wén	'god'
wàùŋ	'monkey'
wōm	'listen'
wárí	'issue'
wá:b	'snake'

The approximants occur in contrastive distribution with other consonants. The following minimal sets illustrate the contrast that each approximant shows with other consonants in word initial position.

[3] Across Ghana 'pear' [pɛər] refers to 'avocado'.

香港大學圖書館 HKU Libraries

Contrast between /j/ and /s, ŋ, k͡p/

jāūk ‘elephant’
sāūk ‘planting stick’
ŋáúk ‘crocodile’
káúk ‘portion’
pāūk ‘shell’

Contrast between /w/ and /ʧ, p, k͡p, v/

wārī ‘to remain’
ʧārī ‘to share’
pārī ‘to take’
k͡pārī ‘to lock up’
vārī ‘to snatch’

- *Glottalic fricative /h/*

The glottalic fricative /h/ is marginally phonemic and occurs only as the initial consonant in a few ideophones and interjections (20).

(20) *hàī* ‘animal call’ (for driving away goats or sheep)
ŋàī ‘no’

香港大學圖書館 HKU Libraries

2.1.3 Vowel inventory and features

The vowel inventory is until present one of the most complex aspects of Buli grammar (e.g. Kröger 1992; Mélançon, Coutu & Prost 1974; Poulter 1985), due to pervasive lengthening and diphthongisation (§2.3.1). As presented in Table 7, there are seven vowel phonemes. Six of them (/i, e, a, u, o, ɔ/) contrast in length.

Table 7: Vowel inventory

Front	**Back**
i	**u**
e	**o**
ɛ	**ɔ**
a	

Vowels are contrastive, as illustrated by the following (near) minimal pairs (21):

(21) /ɔ/ vs. /ɛ/ *tɔ̄ŋ* ‘cast (dice)’ *tɛ̄ŋ* ‘land’

/u/ vs. /i/ *lūgī* ‘pick out’ *līgī* ‘cover’

/ɔ/ vs. /a/ *tɔ̄gī* ‘narrate’ *tāgī* ‘wash (clothes)’

/o/ vs. /a/ *dōm* ‘bite’ *dām* ‘stir’

/e/ vs. /o/ *pē* ‘swear’ *pō* ‘inside’

香港大學圖書館 HKU Libraries

Vowel length is phonemic in six vowels, as the minimal pairs in (22) illustrate.

(22)	*sām*	'to urinate'	*sā:m*	'to mash'
	pīsī	'to pick up'	*pī:sī*	'be many'
	pūsī	'to burst'	*pū:sī*	'to greet'
	kɔ̀k	'ghost'	*kɔ̀:k*	'hundred'
	pōm	'to butt' (sp.)	*pō:m*	'recently'
	ɟfērī	'to wipe off'	*ɟfē:rī*	'to tear'

The distinction between the vowels /e/ and /ɛ/, and between /u/ and /ɔ/ is collapsing. Buli speakers tend to substitute them frequently since they do not contrast with each other phonemically. In basic CV words, such as those presented in Table 8, the forms with the high vowels occur more frequently.

香港大學圖書館 HKU Libraries

Table 8: Minimal sets showing contrast in vowels

	i	**e ~ ɛ**	**u**	**o ~ ɔ**	**a**
p	*pī* 'to soak'	*pē ~ pɛ̄* 'to swear		*pō ~ pɔ̄* 'inside'	*pā* 'to take'
b	*bī* 'then'	*bē ~ bɛ̄* 'be cooked'	*bū* 'eat (sp.)'	*bō ~ bɔ̄* 'be.located'	*bà* 'CL.2'
t	*tì* 'CL.8'	*tē ~ tɛ̄* 'to give'			*tā* 'to hold'
d	dì 'CL.3'	*dē ~dɛ̄* 'to eat'	*dú* 'there'	*dō ~ dɔ̄* 'to ride'	*dā* 'to buy'
k			*kù* 'CL.7'	*kō ~ kɔ̄* 'to kill'	*kā* 'to swear'
g		*gē ~ gɛ̄* 'to reserve'	*gū* 'to bury'		*gā* 'to eat' (sp.)
f	*fī* '2SG'	*fē ~ fɛ̄* 'to compel'	*fú* '2SG'		
s	*sì* 'CL.6'	*sē ~ sɛ̄* 'to roast'	*sū* 'to wear'	*sō ~ sɔ̄* 'to bathe'	*sā* 'to smear'
ʧ	*ʧī* 'to wait'	*ʧē ~ ʧɛ̄* 'to cut'			*ʧā* 'to faint'
ʤ	*ʤī* 'to carry'	*ʤē ~ ʤɛ̄* 'to wrestle'	*ʤū* 'to burn'	*ʤō ~ ʤɔ̄* 'to enter'	
n	*nī* 'to rain'	*nē ~ nɛ̄* 'to swallow'			*nā* 'to explode'
m	*mí* '1SG'	*mē ~ mɛ̄* 'to mould'			
ŋ			*ŋū* 'to smoke'		*ŋà* 'CL.4'
l	*lì* 'and'	*lē ~ lɛ̄* 'to insult'	*lū* 'to pierce'	*lō ~ lɔ̄* 'to fall'	*lā* 'to laugh'
j	*jī* 'to wear'				*já* 'PRF'
k͡p	*k͡pī* 'to die'				*k͡pā* 'to weed
ɲ		*ɲē ~ ɲɛ̄* 'to do'	*ɲū* 'to drink'	*ɲō ~ ɲɔ̄* 'put into'	*ɲā* 'to see'
ŋ͡m		*ŋ͡mē ~ ŋ͡mɛ̄* 'to pinch'			*ŋ͡mā* 'to blame'

香港大學圖書館 HKU Libraries

2.2 The syllable

A syllable in Buli consists of one of the following:

- A vowel or a syllabic nasal serving as the only element of the syllable. This vowel or syllabic nasal is the peak of the syllable with no onset preceding it and no coda following it.
- Only a vowel, or a vowel with an onset and/or a coda. An onset or a coda is a consonant.

2.2.1 Syllable types

The following syllable types occur in the database.

(22)			
	V(:)	***à.****kūm,* ***áò***	'personal name', 'INTJ',
	N	***ǹ****-dék*	'myself'
	VC	***àn***	'NEG.PFV'
	CV	***dā***	'to buy'
	CV:	***ɲí:****.lí*	'horn'
	CVV	***túé***	'beans'
	CVC	***pōk***	'wife'
	CV:C	***tì:m***	'medicine'
	CVVC	***bīāk***	'dog'
	CCV	*kā.****brī***	'to break into halves'
	CCVC	*bɔ̀.****glūk***	'shrine'

A vowel or a syllabic nasal can independently form the patterns V and N respectively. This is seen in the initial syllable of the personal name ***à.****kúm* and the first-person pronoun *m̀* as (22) shows. A vowel–consonant sequence forms the pattern VC, as the negation morpheme *àn* shows. Conversely, as the verb *dā* 'to buy' shows, consonant–vowel sequence forms the pattern CV. The pattern CV: is formed by a long vowel occurring as a peak and a consonant occurring as a coda. This is illustrated with the noun ***ɲí:****.lí* 'horn'. This syllable structure differs from CVV whose peak is occupied by a sequence of vowels. A word example that illustrates a CVV pattern is *túé* 'beans' given in (22).

香港大學圖書館 HKU Libraries

The pattern CVC is formed with a vowel surrounded by consonants, as in the noun *pōk* 'wife'. The vowel constitutes the peak of the syllable, the consonant that precedes the peak is the onset, and the consonant that follows the peak is a coda. The coda position is usually occupied by the consonants /k, m, n, ŋ/. In the coda position, nasals /m, n, ŋ/ are not syllabic. The patterns CV:C and CVVC have a similar structure as CVC. However, the peak of CV:C syllables contain long vowels (as in *tì:m* 'medicine'), whereas the peak of CVVC contains a sequence of two vowels (as in *bīāk* 'dog'). The pattern CCV is formed with a vowel (peak) and a plosive–liquid consonant cluster occurring as the onset (as in *kā.brī* 'to break into halves'). Like a CCV syllable, a CCVC syllable has a plosive–liquid cluster occurring as an onset, before a vowel (peak). A consonant (coda) follows the vowel (peak). The plosive–liquid sequence in the onset of CCV and CCVC syllables conforms to the *sonority sequencing principle/constraint/profile/scale/generalisation* (cf. Blevins 1995; Clements 1990; cf. Jespersen 1904; Selkirk 1984). This principle suggests that cross-linguistically, elements of the syllable can be arranged from the most sonorous to the least or (non-)sonorous, starting from the nucleus. This is seen in the second syllables of the words *kā.**brī*** 'to break into halves' and *bɔ̀.**glūk*** 'shrine'. The syllable in each of these two words has a vowel as its peak. Starting from the peak, and inspecting leftwards, the liquids come before the plosives. On the sonority scale, vowels are the most sonorous, so they rank higher than liquids. Plosives are obstruents and, as such, lack sonority.

2.2.2 Syllable template

Considering the syllable patterns in (22), the syllable template of Buli is (C)(C)V(V)(C) or N. I do not distinguish a long vowel from a VV sequence in this template. The diagram is based on standard moraic theory (see Hayes 1989; Hyman 1985). This theory makes a distinction between a heavy syllable and a light syllable. For example, it allows a monophthong or a

香港大學圖書館 HKU Libraries

syllabic nasal, which is shorter in length, to project a mora. Long vowels and diphthongs are longer in length, so they project two moras. Neither an onset nor a coda projects a mora. All native words and loanwords in the database fit into this structure.

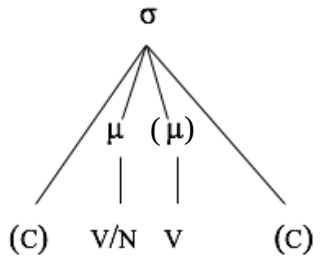


Figure 3: Syllable template

Each of the syllable patterns in (22) is typically found in specific word classes. In the following paragraphs, I discuss the occurrence of the syllable patterns in various word classes.

The structure V is commonly found as a prefix in personal names (e.g. *à.kúm* 'NAME'). Many native personal names bear the prefix *a-* which constitutes an independent syllable. Through nativisation, personal name borrowings that begin with consonants normally take the *a-* prefix. *a-* insertion at the word-initial position is also rampant in grammatical particles. This has created disyllabic variants of grammatical morphemes that have the syllable V in the word-initial position. For example, the coordinator *lì* 'and', the focus marker *lī*, and the clausal connective *tì* have the structure CV. The patterns VV and V: are marginal. The interjection *áò* has the structure VV, whereas other interjections like *ó: é:* have the pattern V:.

The structure VC is represented by the negation morpheme *àn*. Aside from *àn*, no other word in my current database has a VC structure.

The N syllable pattern is seen in the first-person pronoun *m̀* and the enumeration clitic *ǹ*=.

香港大學圖書館 HKU Libraries

The structure CV is much more frequent in the database, manifesting in a range of word classes, including nouns (e.g. *kɔ̀bà* 'fathers'), focus marker *ká*, and coordinator *lì*. Many noun class markers have the structure CV (e.g. *wà* 'CL.1', *bù* 'CL.9', *sì* 'CL.6'). Many monosyllabic verbs also have a CV structure (e.g. *ɲū* 'to drink'), and some disyllabic verbs have a CV structure in both first and second syllables (e.g. *sā.tī* 'to slip').

The structure CVC manifests in some nouns (e.g. *dɔ̀k* 'house') and verbs (e.g. *bāŋ* 'to forget'). The structure CVCV is also found in verbs like *kɔ̄tī* 'to lift'. Some disyllabic verbs (e.g. *sāgī* 'to show', *tābī* 'to trample upon') also have a CVCV structure. These CVCV verbs, with a plosive at the beginning of their second syllables, have CVC variants (i.e. *sāgī ~ sāg* 'to show', *tābī ~ tāb* 'to trample upon'.

The structure CVV occurs in plural nouns (e.g. *bíé* 'seeds', *tūē* 'ears', etc.). There are also variants of verbs that have the CV: structure. Such verb variants (e.g. *jā:* 'to find', *mā:* 'to help') have CV:CV variants (as in *jā: ~ jā:lī* 'to find', and *mā: ~ mā:rī* 'to help').

The structure CCV is mostly found in the second syllable of disyllabic verbs (e.g. *sūgrī* 'to wash', *tāglī* 'to flood'). The fact that CCV syllables occur in the second position of verb stems suggest that they are the result of the contraction of CV.C(V)CV structures.

The pattern CCVC is found in the second syllable of property nouns (e.g. *págrík* 'strength', *sɔ́blík* 'black') and in some common nouns (e.g. *bɔ̀glūk* 'shrine'). The final consonant of CCVC syllables is typically /k/ as *-k* is a class suffix.

Finally, the structure CVVC is commonly found in nouns (e.g. *ŋáúk* 'crocodile', *k͡pīāk* 'hen'). The structure CV:C is also found in singular nouns (e.g. *bí:k* 'child', *nà:b* 'chief').

香港大學圖書館 HKU Libraries

2.2.3 Constraints on consonants in a syllable

The positions of each sound in syllables have been summarised in Table 9. A cell with a plus (+) sign indicates that the corresponding consonant occurs in that position, whereas a cell with a minus (-) sign indicates that a sound does not occur in that position. Consonants may cluster in syllables, but this clustering is restricted to a maximum of two consonants. Complex onsets usually do not occur word-initially. A syllable-onset position can be occupied by any consonant, whereas a syllable-coda position is typically occupied by the consonants /k/, /b/, /m/, /n/, or /ŋ/. The consonants /p/, /s/, /l/, and g/ occur marginally in syllable-coda position, usually when the final vowel of a verb is elided. Labio-dental, palatal, and labio-velar consonants, as well as the alveolar plosives (/t/ and /d/) and the voiced alveolar fricative /z/, do not occur in the coda position.

Table 9: Distribution of consonants in a syllable

	p	b	t	d	k	g	f	s	z	tʃ	dʒ	n	m	ŋ	ɲ	l	j	w	k͡p	g͡b	ŋ͡m
Onset	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Coda	+	+	-	-	+	+	-	+	+	-	-	+	+	+	-	+	-	-	-	-	-

Only a few syllables in the database contain consonant clusters. These clusters mostly occur in the second syllable of disyllabic words. For example, *gā.**glī*** 'to stammer', *kā.**brī*** 'to break into halves. Consonants that form these clusters are constrained in distribution and follow a specific sonority principle. The first consonant of a cluster is one of the plosives /p/, /k/, and /g/ followed by a liquid. This pattern, as mentioned in § 2.2.1 conforms to the *sonority sequencing principle* which states that sonorous sounds occur at the peak or near the peak. Liquids are sonorous. This is why they occur after plosives, close to a vowel that forms the nucleus of the syllable. A coda, if present, can be another obstruent (as in the final syllable of *bɔ̀.**glūk*** 'shrine').

香港大學圖書館 HKU Libraries

2.3 Phonological processes

The following subsections describe common phonological processes: vowel lengthening, diphthongisation, hiatus resolution (§ 2.3.1), vowel harmony (§ 2.3.2), vowel elision and vowel insertion (§ 2.3.3), vowel and consonant deletion (§ 2.3.4), nasalisation and homorganic assimilation (§ 2.3.5), and devoicing of obstruents (§ 2.3.6)

2.3.1 Vowel lengthening, diphthongisation, and hiatus resolution

Noun stems, particularly those with the structure CV, have their vowels lengthened and sometimes diphthongised before the class suffixes *-k* or *-ŋ*. This is illustrated in the following examples:

(23) Vowel lengthening in Ci noun stems

bí-	*bí:k*	‘child’
fí-	*fí:k*	‘small’
mí-	*mí:k*	‘rope’
ʧí-	*ʧí:k*	‘moon’

香港大學圖書館 HKU Libraries

(24) Vowel lengthening and diphthongisation in Cu nouns

a.	*bū-*	*bū:-k*	‘goat’	
	pū-	*pū:-k*	‘belly’	
	gú-	*gú:-k*	‘hill’	
b.	*ʧú-*	*ʧú:k*	*ʧwí:k*	‘soap’[4]
	ʤú-	*ʤú:k*	*ʤwí:k*	‘tail’
	sú-	*sú:k*	*swí:k*	‘path’

(25) Vowel lengthening and diphthongisation in Co noun stems[5]

só-	*só:m*	*swó:m* / *swé:m*	‘hare’
gō-	*gō:m*	*gwō:m*	‘slumber’
bò-	*bò:m*	*bwò:m*	‘string’ (sp.)
ŋò-	*ŋò:ŋ*	*ŋwò:ŋ*	‘mouse’

By comparison, there are verbs like *bō:rī* [bwō:rī] ‘pour’ and *kō:rī* [kwō:ri] ‘squat’, etc. Additionally, verbs such as *tōm* ‘to work’ >> *tūnī* [twīnī] ‘to pay’ >> *tūūnī* [twī:nī] ‘to work’ ‘job’ suggest vowel changes.

香港大學圖書館 HKU Libraries

[4] The vowels in (23b) are inconsistently represented in Buli literature as <iu>, <ui>, or <ii>.

[5] The rounding feature appears in Buli orthography as <o> and <u> (e.g. *suom* ‘hare’, *guom* ‘slumber’, etc.). In Buli linguistics, also, /uo/, /ue/ have been analysed as diphthongs.

(26) Vowel lengthening and dipthongisation in Cɔ noun stems[6]

		Singular	**Plural**	**Gloss**
tɔ́-	**tɔ́:k*	[twɔ́:k]	[twá:tà]	‘door’
sɔ̄-	**sɔ̄:k*	[swɔ̄:k]	[swā:tā]	‘sibling’
lɔ̄-	**lɔ̄:k*	[lwɔ̄:k]	[lwā:tā]	‘little’
tɔ̄	**tɔ̄:k*	[twɔ̄:k]	[twā:k]	‘bitter’

By comparison, there are verbs like *pɔ̄:gī* [pwɔ̄:gī]~ [pwā:gī] ‘to rot’, *mɔ̄ɔ̄gī* [mwɔ̄:gī]~ [mwā:gī] ‘to rise (sun). And there is [dwā:gī] ‘lie down’ but not * [dɔ̄:gī].

(27) Vowel lengthening and diphthongisation in Ca noun stems

Stem		**Singular**	**Plural**	**Gloss**
bā-	**bā:k*	[bjā:k]	[bā:sā]	‘dog’
ƴā	**ƴā:k*	[ƴjā:k]	[ƴā:sā]	‘waist’
lá-	**lá:k*	[ljá:k]	[lá:sà]	‘axe’
kpā-	**kpā:k*	[kpjā:k]	[kpēsā]	‘chicken’

[6] The rounding feature, together with the vowels, appears in Buli orthography as <oa>, <ua> (e.g. *toa* ‘sibling’, *doa* ‘friend’). Additionally, /ɔ/ is sometimes represented as <wa>, as is the case with the class 3 marker ɔ. In Buli linguistics, the rounding feature, together with the vowels, has been analysed as diphthongs or vowel sequences: /ʊɔ/, /ʊa/, and /ue/.

香港大學圖書館 HKU Libraries

The glide /j/ is represented as /i/, e.g. *bīāk* ‘dog’, *ʧīāk* ‘waist’, *líák* ‘axe’, etc. Many singular and plural nouns exhibit alternation between /ia/ and /a:/. The consonants of the final syllables play a role in this alternation. In nouns that do not show this alternation, such as *kpɛ̄sā* ‘chickens’ (singular *kpīāk* ‘chicken’), it is still possible to assume lengthening and (opening) diphthongisation at an earlier stage (i.e., *kpā:sā ~ kpɛ̄:sā ~ kpīɛ̄sā ~ kpɛ̄sā*). In cases where there seems to be very little possibility, as with *sāāb* ‘millet gruel’ and its plural *sīrā*, we find that the final consonant of the singular is not a velar. This indicates that consonants of final syllables contribute to vowel alternation and vowel change.

By comparison, verb stems and suffixes show alternation (28).

(28)	*bā:rī*	‘to carress’	(*bīārī)
	bīāgī	‘give birth’	(*bāāgī)
	bārī	‘to trap’	
	bāgī	‘be capable’	
	ŋmā:rī	‘be spicy’	(*ŋmāāgī)
	ŋmīāgī	‘to wash (clothes)’	(*ŋmīārī)
	ʧā:rī	‘to have diarrhoea’	(*ʧīārī)
	ʧīāgī	‘to snatch’	(*ʧāāgī)
	ʧārī	‘to share’	
	ʧāgī	‘be satisfied’	

香港大學圖書館 HKU Libraries

Where palatalisation is not seen in Ca stems, the low back vowel breaks prior to the realisation of the velar so that it is released as [aʊ]. Due to this, /aʊ/ is sometimes analysed as a vowel sequence or a diphthong in Buli linguistics with forms such as /ŋáʊ́k/ ‘crocodile’, /páʊ́k/ ‘shell’ /jáʊ́k/ ‘elephant’, and /káʊ́k/ ‘portion’ provided as supporting data.

a) Vowel lengthening in Ce noun stems

Ce noun stems are rather limited, with only a few words like the temporal noun *dē:m* [djē:m] and the quantifier *mé:ná* [mjé:ná] ‘all’. Additionally, there are deverbal nouns such as *bè:rík* [bjè:rík] ‘cup’ derived from *bē:rī* [bjē:rī] ‘to fetch’ as well as like *ʮē:rī* [ʮjē:rī], *wē:nī* [wjē:nī] ‘to say’. The palatal feature, together with the vowel, is usually presented in Buli linguistics as /ie/.

Where palatalisation is not seen in Ce stems, the vowel is raised prior to the realisation of the velar so that it released as [ɐ̨u]. Hence, /eu/ is usually analysed as a vowel sequence or a diphthong in Buli linguistics. The nouns *nèūk* ‘nine’ *ʤèùŋ* ‘soup’, and *béúŋ* ‘excrement’ illustrate such cases.

Lengthening and palatalisation create multiple surface variants of underlying (stem) vowels. If one considers surface realisations, they are likely to arrive at several tens of forms for the inventory, as seen in Kroger’s (1992: 2), which presents seventy-two phonetic vowels comprising 10 monophthongs, 9 long vowels, 50 diphthongs, and 3 triphthongs. Similarly, the phonemic inventory, which has been analysed and re-analysed several times, sometimes by the same authors – usually as a 5, 7, or 9 vowel system – is also due to these same surface effects. A subtraction of surface manifestations leaves us with seven optimal basic phonemic vowels; all other forms are allophonic variants of the seven.

香港大學圖書館 HKU Libraries

A final point about vowels is about how realisation of the low back vowel /a/ in certain contexts. It is realised as [i] when it occurs in a penultimate syllable. This is commonly seen in the plural suffixes *-sa*, *-ta*, and *-a* when they occur in definite nouns, for example, *bísáŋá* [bí-sí-ŋá] 'the children', *kɔ̄bāŋá* [kɔ̄bīŋá] 'the bones', and *wɔ̄gtāŋá* [wɔ̄gtīŋá] 'the sabdariffas'. However, this allophony does not apply to the vowel of *-ba*, as the entire syllable is lost in this same environment due to contraction (e.g. *kɔ̀bà* 'fathers vs. *kɔ̀má* 'the fathers', *màbà* 'mothers' vs. *màmá* 'the mothers').

b) Unresolved Hiatus

Some vowel sequences are outcomes of unresolved hiatus, as shown in (29). This is more noticeable in /i + e/ and /u + e/ sequences where the plural suffix *-e* is attached to noun stems that have *-i or -u* as their vowels.

(29) /i + e/

Stem	**Pl. noun**	**Gloss**
bí-	*bí.é*	'seeds'
sí-	*sí.é*	'bees'
ŋī-	*ŋī.ē*	'necks'
dí-	*dí.é*	'foreheads'

香港大學圖書館 HKU Libraries

(30) /u + e/

Stem	Pl. noun	Gloss
bū-	*bū.ē*	'domestic animals'
tú-	*tú.é*	'beans'
kù-	*kù.è*	'hoes'
tū-	*tū.ē*	'ears'

2.3.2 Vowel harmony

Within words, a vowel sometimes assimilates the rounding feature of another vowel. In (31), for instance, the front vowel in A changes to a back vowel in B. Rounding harmony is optional but quite pervasive in property nouns and causes them to inherit an additional class.

	A		B	
(31)	*sɔ̄blīk* (CL.5)	~	*sɔ̄blūk* (CL.7)	'black'
	mɔ̀nìk (CL.5)	~	*mɔ̀nùk* (CL.7)	'red'
	fòlík (CL.5)	~	*fòlúk* (CL.7)	'lazy'
	ʤētīk (CL. 5)	~	*ʤētūk* (CL.7)	'slim'

香港大學圖書館 HKU Libraries

2.3.3 Vowel elision and vowel insertion

Vowels are sometimes elided to resolve a hiatus involving vowel sequences at the boundary of morphemes.

/i + a/

Vowel elision in the sequence /i + a/ is seen where pronouns occur adjacent to the negation morpheme *àn.* Any of the two vowels can be elided to break a sequence /ia/ (32). However, the high vowel is usually deleted.

	Pro.	**Neg.**	**Output**	**Gloss**
(32)	*mí*	*àn*	[mǹ̩]	I did not …
	fí	*àn*	[fǹ̩]	You did not …
	tì	*àn*	[tǹ̩]	We did not …
	nì	*àn*	[nǹ̩]	You (2PL.) did not …
	dì	*àn*	[dǹ̩]	It (CL.3) did not …
	sì	*àn*	[sǹ̩]	They (CL.6) did not …

Vowel elision involving a front vowel and the low back vowel /a/ also applies to pronouns and the imperfective marker *à*, as shown in (33) and (34). In this context, compensatory lengthening is triggered.

(33) *Mí* *à* *vūːsī* → [mâː vūːsī]
1SG IPFV rest

'I am resting.'

(34) *Dì* *à* *vūːsī* → [dàː vūːsī]
CL.3 IPFV rest

'It is resting.'

香港大學圖書館 HKU Libraries

Similarly, when the high-toned imperfective marker *á* follows a verb that ends with the high front vowel, the front vowel is elided. And, as illustrated in (35) and (36), the back vowel is lengthened.

(35) *Àtēŋ* *kàlì* *á* *kūm* [àtɛ̰ŋ kàlá: kṵ̄m]
NAME be.sitting IPFV cry
'Ateng is sitting and crying.'

(36) *Wà* *bàgì* *á* *dɛ̄* [wà bàgá: dɛ̄]
CL.1 be.able IPFV eat
'He can eat (a lot of food).'

/u + a/

The application of vowel elision to the sequence /u + a/ is illustrated in (37) and (38). If /u/ is the target of deletion, approximation is sometimes triggered.

(37) *Kù* *àn* *dɛ̀* *jà* [kṵn dɛ̀ jà] ~ [kwa̰n dɛ̀ jà]
CL.7 NEG eat PRF
'It has not eaten.'

(38) *Bù* *àn* *dɛ̀* *jà* [bṵn dɛ̀ jà] ~ [bwa̰n dɛ̀ jà]
CL.9 NEG eat PRF
'It has not eaten.'

香港大學圖書館 HKU Libraries

Vowel elision optionally applies to the sequence /a + a/ created at a morpheme boundary. This is usually seen when a pronoun ending with the /a/ is followed by the negative morpheme *àn* (39).

	Pro.	**Neg.**		**Output**	**Gloss**
(39)	*bà*	*àn*	→	[bn̩]	They did not …
	kà	*àn*	→	[kn̩]	It (CL.5) did not …
	ŋà	*àn*	→	[ŋn̩]	They (CL.4) did not …

Vowel deletion commonly applies to the final high vowel in verbs like those given in (40).

(40)	*pīlī*	→	*pīl*	‘to cover with cloth’
	tābī	→	*tāb*	‘to trample upon’
	ʄāgī	→	*ʄāg*	‘to be satisfied’
	kūlī	→	*kūl*	‘to go home’
	pāsī	→	*pās*	‘to tear’

As for disyllabic verbs whose initial syllable has a long vowel, their final syllable is sometimes elided (41).

(41)	*jā:lī*	→	*jā:*	‘to like’
	mā:rī	→	*mā:*	‘to help’
	pū:rī	→	*pū:*	‘to wash face’
	fā:rī	→	*fā:*	‘to marry’
	fī:rī	→	*fī:*	‘to winnow’

In polysyllabic verbs, such as (42), the high vowel of the final syllable is rarely elided. Instead, the high vowel of the penultimate syllable is elided in some contexts.

(42)	*k͡pāmīsī*	→	[k͡pm̩sī]	‘to fold’
	fōrīsī	→	[fōrsī]	‘to move away’
	tūlīsī	→	[tūlsī]	‘to reply’
	fɔ̄bīlī	→	[fɔ̄blī]	‘to complain’

香港大學圖書館 HKU Libraries

2.3.4 Vowel and consonant deletion

In contexts where the perfect marker *já* has little prominence and follows an open-syllable verb before a discontinuity of speech, the low vowel of the perfect marker *ja* is typically elided (43).

(43) *Zá-á-ŋá* ***kò*** ***já.*** [zá-á-ŋá **kòj**].
millet-4-DEF.4 dry PRF
'The millet has dried.'

The vowel of the focus marker *ká* is usually affected by a similar elision process. When this focus marker follows an open syllable verb, it is typically absorbed completely by the verb, but its tone survives. The vowel of the verb is then lengthened in compensation for the lost focus marker, while the predicate marker *=mā* is clicitised to the verb. Compare the sentences in (44) and (45).

(44) *Bá-lá* *míéná* *k͡pì* *ká=mā.*
CL.2-DIST all die.PFV FOC=PRED.EMPH
'All those (people) died.'

(45) *Bá-lá* *míéná* *k͡pì=í=mā.*
CL.2-DIST all die.PFV=FOC=PRED.EMPH
'All those (people) died.'

香港大學圖書館 HKU Libraries

Finally, the velar stop /g/ is sometimes weakened and deleted when it occurs between a vowel and the liquid (46). The vowel of the first syllable is lengthened in compensation for the lost segment.

(46)	/līgrī/ →	[lī:rī]	‘money’
	/sūgrī/ →	[sū:rī]	‘to wash’
	/tāgrī/ →	[tā:rī]	‘to change/exchange’
	/tɔ̄grī/ →	[tɔ̄:rī]	‘to slaughter (by cutting the throat)’
	/bɔ̀glūk/ →	[bɔ̀:lūk]	‘shrine’

2.3.5 Nasalisation and homorganic assimilation

Unlike some Gur languages (e.g. Dagaare, Gurenɛ, and Likpakpaln), there are no contrastive nasal vowels in Buli. Nasal consonants spread their nasal feature leftwards to vowels. Vowels following nasal consonants do not acquire nasality.

(47)	*àn*	[a̰n]	‘NEG.PFV’
	wén	[wḛn]	‘god’
	wàùŋ	[wa̰ṵ̰ŋ]	‘monkey’
	dùìŋ	[dṵ̰ḭŋ]	‘mosquito’
	ʧūm	[ʧṵ̰m]	‘tomorrow’
	dá:m	[da̰:m]	‘alcohol’
	bīlīm	[bīlḭ̄m]	‘to roll’
	pūŋī	[pṵ̰ŋī]	‘to swim’

Nasal consonants assimilate to the place of articulation of following consonants. This process occurs at morpheme boundaries between the coda of an initial morpheme and the onset of the second morpheme. I illustrate this using *kán* ‘NEG.IMP’ and verbs.

香港大學圖書館 HKU Libraries

(48) *Kán* *dàlì* → [kấ**n** **d**àlì]
NEG.IMP pull
'Do not pull…'

(49) *Kán* *ʧàlì* → [kấ**ɲ** **ʧ**àlì]
NEG.IMP run
'Do not run'

The alveolar nasal /n/ is realised as: [m] before a bilabial plosive, [ɱ] before a labio-dental fricative, and [ŋ] before a labial-(velar) plosive or an approximant.

(50) a. *Kán* *pàrì.* → [kɐ́**m** **p**àrì]
NEG.IMP take
'Do not take (it).'

b. *Kán* *và.* → [kɐ́**ɱ** **v**à]
NEG.IMP follow
'Do not follow.'

c. *Kán* *kùlì.* → [kɐ́**ŋ** **k**ùlì]
NEG.IMP go.home
'Do not go home'

d. *Kán* *gàglì.* → [kɐ́**ŋ** **g**àglì]
NEG.IMP stammer
'Do not stammer.'

e. *Kán* *wà:sì.* → [kɐ́**ŋ͡m** **w**à:sì]
NEG.IMP whisper
'Do not whisper.'

香港大學圖書館 HKU Libraries

The rules apply in a similar way when the final sound of the first stem is the bilabial nasal /m/ or velar nasal /ŋ/. This is shown in (51).

(51) a. *ʤām kàlì.* → [ʤą̄**ŋ k**àlì]
come sit
'come and sit'

b. *ʤām tà:m.* → [ʤą̄**n t**à:m]
come pass
'come and pass'

c. *ʤām fà:rì* → [ʤą̄**ɱ f**à:rì]
come marry
'come and marry'

d. *g͡báŋ fí:k* → [g͡bą́**ɱ f**í:k] 'booklet'
book small
'small book'

The discussion in this section has shown the nature of nasalisation and homorganic assimilation. There are no contrastive nasal vowels, but nasal consonants spread nasality leftwards to preceding vowels. Nasal consonants also assimilate rightward to the place of articulation of consonants that follow them.

香港大學圖書館 HKU Libraries

2.3.6 Devoicing of obstruents

The plosives /b/ and /g/ are gradually devoiced when they occur as utterance-final elements. As (52) illustrates, this usually applies to verbs when they lose their final vowels and to some nouns. A devoiced stop is unreleased. The features 'devoicing' and 'unreleased' are symbolised by [̥] and [̚] respectively.

(52) /kū:b/ → [kū:b̥̚] 'funeral'

/nà:b/ → [nà:b̥̚] 'chief'

/lōbī/ → [lōb̥̚] 'to lay egg'

/ʮāgī/ → [ʮāg̊̚] 'to be satisfied'

/bīāgī/ → [bīāg̊̚] 'to give birth'

香港大學圖書館 HKU Libraries

2.4 Tone

2.4.1 Inventory, structure, and function of tone

Buli has three tones, namely High, Low, and Mid, which serve both lexical and grammatical functions. Mid tone is the default tone of verbs when they are cited in isolation. While there are no inherent contour tones, placing discrete tones side-by-side can create tones that resemble contour tones. The minimal pairs and sets in (53) illustrate the lexical function of tone. Lexical tone contrast is rare in verbs.

(53) Minimal pairs and sets

LL vs. HH

bì:k 'language'
bí:k 'child

nà:b 'chief'
ná:b 'cow'

L.L vs. M.M

làlìk 'clay'
lālīk 'bull'

L.L vs. H.H

bùlùk 'PLACE'
búlúk 'armpit'

LL.M vs. MM.M

bò:sūk 'grave'
bō:sūk 'python'

L vs. M vs. H

bàŋ 'lizard'
bāŋ 'forget'
báŋ 'bangle'

The three tones (H, M, and L) occur in both simple and complex words. In simple words, identical tones usually occur sequentially on a series of vowels with no intervening consonants (e.g. *tìàk* 'mat', *bīāk* 'dog', *bíé* 'seeds'). A long vowel always bears a single tone (e.g. *bì:k* 'speech', *bū:k* 'goat', *dá:m* 'alcohol'). Different tones may also occur in simple words that have consonants between vowels (e.g., *gàrūk* 'dress'). However, different tones rarely occur sequentially in simple words, except for a handful of words in my dataset (e.g., *dèēm* 'yesterday', *dàām* 'a few days ago'), which are realized with an L.M pitch.

香港大學圖書館 HKU Libraries

Separate tones usually do not follow each other successively without any intervening element. When discrete tones occur successively, as in the case of *dàām* 'a few days ago', they produce gliding effects that resemble contour tones. Such tone series indicate a historical change in the tonal structure of the words that bear them. This is especially true for sequences involving a Mid-tone. The Mid-tone has an unusual character, which led to its being overlooked in some of the earliest work on the language. However, after reinstating the Mid-tone later, Akanlig-Pare (2005: 307–328) argues, using language-internal and comparative-Gur evidence, that the Mid-tone in nouns evolved through attrition of vowels in class suffixes. Successive discrete tones sometimes also represent a collision of two vowels, each carrying a distinct tone. As the vowels collide and phonological changes affect them, the discrete tones merge to create a contour-like tone. This phenomenon is typically observed when the vowel of a pronoun collides with the high-toned imperfective marker *á* or the negative marker *àn*, resulting in H.L and L.H tone series.

香港大學圖書館 HKU Libraries

(54) Pronoun + Imperfective marker

Tone	Example	Constituents		Gloss
		Pronoun	Imperfective	
L.H	*nàá*	*nì* '2PL'	á 'IPFV'	'You are …'
	tàá	*tì* '1PL'	á 'IPFV'	'We are …'
	kùá	*kù* 'CL.7'	á 'IPFV'	'It is …'

(55) Pronoun (emphatic) + Negative

Tone	Example	Constituents		Gloss
		Pronoun	Negative	
H.L	*máàn*	*mí* '1SG'	*àn* 'NEG.PFV	I did not …
	fáàn	*fí* '2SG'	*àn* 'NEG.PFV	You did not …
	wáàn	*wá* 'CL.3'	*àn* 'NEG.PFV	S/he did not …

香港大學圖書館 HKU Libraries

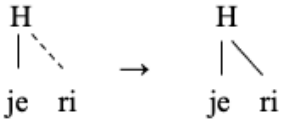
2.4.2 Tonal processes

2.4.2.1 Tone copying

Since every tone-bearing unit must have a tone, toneless syllables always acquire tone from their neighbours. This process, referred to as tone-copying, applies only to the vowels of suffixes because every word stem inherently bears a tone. The vowels of suffixes normally receive the same tone as their stems. However, this process may be interrupted by an utterance-final boundary tone, a Low tone that surfaces at the end of a prosodic unit. This Low boundary tone typically occurs at the end of plural nouns when they are cited in isolation, serving to indicate where one word-unit ends and another begins. The simplified autosegmental model in (56) illustrates how toneless suffixes acquire tones from stems (see also Schwarz 2005).

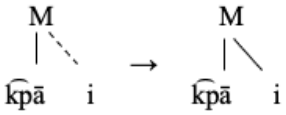
(56) a. **High tone copying**

yé-ri → *yérí* 'house'



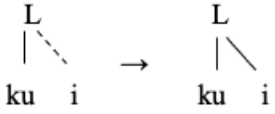
b. **Mid tone copying**

k͡pā-i → *k͡pāī* 'occiput'



c. **Low tone copying**

kù.i *kù.ì* 'hoe'



香港大學圖書館 HKU Libraries

These examples show a regular copying process, where each of the toneless suffixes *-ri* and *-i* copy the tone of their stems. This process is usually obstructed by boundary low tone, especially with non-rV or V suffixes whose stem have a high vowel. Such suffixes receive only a boundary low tone, which creates a H.L sequence for stems bearing High tone (e.g. *bí-sà* 'children', *nú-bà* 'people', *míítà* 'ropes', etc.). No examples for CV stems bearing mid tones were found, but examples for CVC stems show that suffixes also acquire the mid tones of their stems (e.g. *kpāg-sā* 'elders', *kɔ̄b-ā* 'bones', *lān-tā* 'meats'). As for stems with low tone, the process applies vacuously to their suffixes. (e.g. *kɔ̀-bà* 'fathers, *mà-bà* 'mothers').

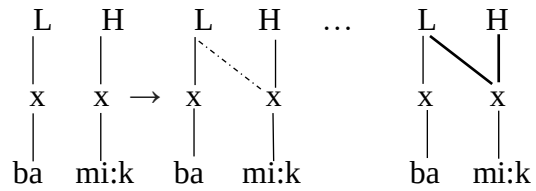
香港大學圖書館 HKU Libraries

2.4.2.2 Tone spreading

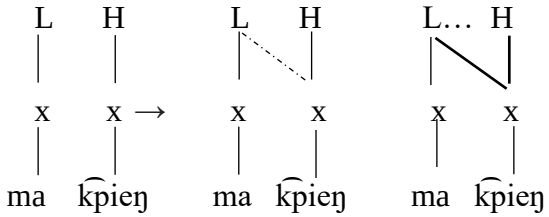
Tone spreading is another process that applies to tones. This process involves two adjacent distinct tone of different stems, usually a low and a high. The low tone spreads to the high if the receiving syllable of the stem is bimoraic[7]- and no other syllable follows the receiving. In Buli linguistics, *Low tone spreading* and *Rising tone absorption*, respectively, are used to describe the processes of 'spreading' and 'absorbing' (Akanlig-Pare 2005, and Akanlig-Pare & Kenstowicz 2002). The process is illustrated in the following autosegmental model.

L spread in L-HH sequence

(57) /bà míík/ → [bà mìík]
CL.2 rope 'their rope'



(58) /mà k͡píéŋ/ → [mà k͡pìéŋ]
mother big 'grandmother' (lit.: 'big mother')

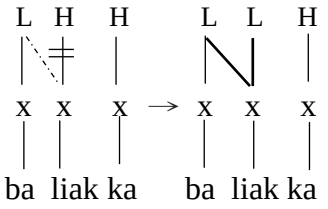


[7] This bimoraic condition is strict, although findings in other studies suggest that monosyllabic stems also receive

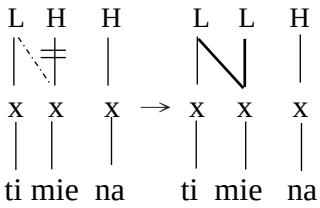
2.4.2.3 Simplification of L.H to L.L

A L.H tone sequence created does not survive if a syllable follows it. If the syllable following a L.H sequence bears a high tone, the high of the syllable remains but the L.H tone sequence becomes L.L to create the sequence L.L-H. Thus, the L.H sequence is simplified. I illustrate this using the constructions *bà líák ká* 'their axe', *tì míéná* 'all of us', *kò bíík ká* 'father's child', *mà kpíéŋ má* 'grandmothers'. The tones of each of these nominal constructions are of the sequence L-H.H-H, but low tone spreading apply simultaneously to change this sequence to L-LL-H. The change process is illustrated with an adapted auto-segmental model in (59) - (62). Generally, the sequence L.L-L is dispreferred.

(59) /bà + líák + ká/ → [bà-lìà-ká]
CL.2 axe.5 DEF.5 'their axe'



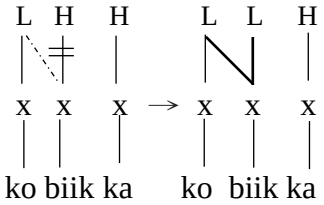
(60) /tì + míéná/ → [tì-mìèná]
1PL all 'all of us'



香港大學圖書館 HKU Libraries

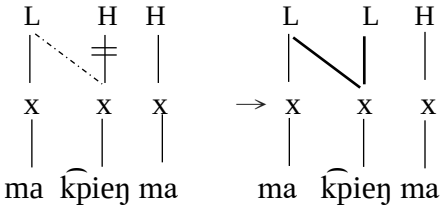
(61) /kò + bíík + ká/ → [kò-bìì-ká]

father child.5 DEF.5 ‘the father’s child’



(62) /mà + k͡píéŋ + má/ → [mà-kpìè-má]

mother.2 big.5 DEF.2 ‘the grandmothers’



香港大學圖書館 HKU Libraries

Essentially, tonal structures at different syntactic domains are complicated by the fact that lexical and grammatical tones can be changed or displaced. In the nominal domain, some elements, especially class markers, are dropped, which affects the surface tone structure. As for verbs, they have Mid tones in citation form, and Low tones typically mark the perfective aspect. However, these tones can change in various syntactic contexts – even in contexts where they occur alone, as in imperative serial verb constructions.

香港大學圖書館 HKU Libraries

2.5 Adaptation of loanwords

Buli has borrowed words from English, Akan, and Hausa which it has been in contact with for decades. Words borrowed from other languages into Buli are nativised, so they also take the structure of native Buli words.

Being the official language of Ghana, English, through its crucial roles in law and governance, commerce, education, etc. has contributed vocabulary to Buli. Whether an English word entered Buli directly or indirectly through another Ghanaian language is difficult to determine in some cases. Akan (Kwa; Niger-Congo) must have served as an intermediate donor, through which vocabulary from other languages entered Buli, considering that it is the most widely spoken indigenous language in Ghana, and it is spoken by many Bulisa and other ethnic groups as a first or second language. Akan loanwords in Buli are from the Asante-Twi dialect, spoken mainly in Kumasi, a major trading hub in south-central Ghana where Bulisa travel for purposes of business, education, etc. Hausa is spoken in many parts of West Africa and has a large native-speaking population in Nigeria and Niger. Hausa words entered Buli mainly through the activities of Hausa-speaking traders in northern Ghana. A few Buli loanwords come from other Ghanaian languages (e.g. Gã, a Kwa language spoken in Ghana's capital). Example (63) is a list of some Akan, English, Gã, and Hausa loanwords.

香港大學圖書館 HKU Libraries

Adaptation of Hausa, Gã, and Akan loanwords

	Buli[8]	**Donor word**	**Gloss**	**Donor**
(63)	*láfíà*	láɸíà	peace	Hausa (Chadic)
	àpàtà:sì	àpètèʃì	local gin	Gã (Kwa)
	kò:dúk	kwàdú	banana	Akan (Kwa)
	sé:gè	sé:ʤè	bastard	Hausa (Chadic)
	kàrìzìím	kˈɛrəs.in	'kerosene'	English (Germanic)
	kàmántòsùk	təˈmɑːtoʊ	'tomato'	English (Germanic)
	tám	taɪm	'time'	English (Germanic)
	kōrīsī	kəˈrekt	'to correct'	English (Germanic)
	sé:tì	ʃɜːt	'shirt'	English (Germanic)
	pō :tī	rɪˈpɔːrt	report	English (Germanic)
	sīgrī[9]	àsíʧìré	sugar	Akan (Kwa) << Eng. (Ger.)
	kàrītʃì	krátʃì	clerk	Akan (Kwa) << Eng. (Ger.)

Generally, sound substitution, insertion, and deletion are the main phonological processes that commonly apply to borrowed words. For example, regarding sound substitution, the voiceless bilabial fricative /ɸ/ is substituted with the voiceless labiodental fricative /f/ (as in *láɸíà* 'peace' vs. *láfíà* 'peace'). Sound insertion commonly occurs in nouns, as noun class suffixes are added to borrowed nouns (as in *kò:dúk* vs. *kwàdú* 'banana'). Tone is imposed on loanwords that come from non-tone languages like English (e.g. *kàrìzìím* 'kerosene'). There are also accidental borrowings, where an error occurred in the transfer. An example is *sé:gè;* the substitution of /ʤ/ with /g/ is unexpected since both sounds are present in the consonant inventory. In the case of *kàmántòsùk* the segment *kà-* appears to be the class 5 prefix of Buli replacing the initial syllable of the English loanword.

[8] Perhaps *sīgrī* 'sugar' and *kōrīsī* 'correct' go back to French *sucre* and *corriger* respectively although French has had little contact with Buli.

2.6 Conclusion

As the discussion has shown, several segmental and tonal constraints combine to make Buli phonology complex. Vowel lengthening, diphthongisation, and deletion affect segments and determine their form and surface realisation. The tone system shows extensive variations at the surface level as inherent lexical and grammatical tones are regularly changed or displaced by low tone spread as well as prosodic changes at the phrasal and syntactic levels.

香港大學圖書館 HKU Libraries

3 Nominal morpho-syntax

3.1 Introduction

Nouns fall into two broad groups, namely, core nouns and property nouns. Core nouns constitute a large group, some of which are underived native words, deverbal nouns, as well as loaned words adapted and absorbed into the language. The nature of core nouns aligns with the traditional understanding of 'noun' as a concept that describes entities that are not time-specific, i.e., naming expressions that refer to entities capable of being conceptualised without reference to time or to a period during which they exist or persist (Givón 1984: 51). By contrast, property nouns refer to qualities (e.g. colour, height) ascribed to entities that core nouns denote – akin to the concept of 'adjective' in many of the world's languages. Property nouns are limited in number and always occur alongside the core nouns being modified.

This chapter discusses nominal morpho-syntax, beginning with the internal structure of nouns (§ 3.2). Section (§ 3.3) covers the morphological classes, focusing on the classes of basic (underived) nouns (§ 3.3.1), derived nouns (§ 3.3.2), and property nouns (§ 3.3.3). Section 3.4 discusses the number marking function of the noun class suffixes, while section 3.5 presents a comparative-Gur overview of the current classes found in Buli. Section 3.6 describes the combination of elements in the nominal domain, showing the agreement patterns between nouns and numerals (§ 3.6.1) and between nouns, property nouns, and numerals (§ 3.6.2). Section 3.7 covers class pronouns. Section 3.8 focuses on definiteness marking, describing the means of expressing definiteness (§ 3.8.1) and special cases in definiteness marking (§ 3.8.2). Section 3.9 discusses first and second-person pronouns. Subsequent sections discuss cover relative pronouns (§ 3.10), the contrastive marker *ǹ-* (§ 3.11), the reflexive marker *dék* (§ 3.12), the reciprocal marker *chāāb* (§ 3.13), the presentative demonstrative *ǹnā* (§ 3.14), the deictic

香港大學圖書館 HKU Libraries

demonstratives *lé* and *lá* (§ 3.15), the demonstrative adverbs *dé* and *dú* (§ 3.16). Section 3.17 covers the interrogative markers *nà* (§ 3.17.1), *bɔ̀à* (§ 3.17.2), *sɛ̀* (§ 3.17.3), *bɛ̄* and *lè* (§ 3.17.4), and *dìnpō* and *dìsàpō* (§ 3.17.5).

3.2 The internal structure of core nouns

A basic noun has a stem and a class suffix as its constituents. The stem, which conveys the essential meaning of a basic noun, usually includes an additional vowel that functions as a stem extender. Noun stems are considered short forms (SF)[10], while noun stems, along with stem extenders (SE) and class suffixes (CS), are considered full forms (FF). The full forms are used in isolation, while the short forms are used when adnominal modifiers alongside core nouns to create complex expressions. The addition of vowels to noun stems creates a sequence of the same vowel (64), or the dispreferred sequence [ai] (65), which then undergoes metathesis. However, plural forms of some nouns that align with the former pattern have only the stems and plural suffixes, whereas plural forms of some nouns that align with the latter have an additional vowel to create the kind of vowel sequence seen in (64) and plural suffixes. Plural forms also show significant unpredictable irregularities.

(64) Short forms vs. Full forms with long vowels

SF	**SE**	**CS**	**FF (Sg.)**	**FF (Pl.)**	**Gloss**
bí-	*i*	*k*	*bíík*	*bísà*	‘child’
mí-	*i*	*k*	*míík*	*míítà*	‘rope’
bū-	*u*	*k*	*būūk*	*būē*	‘goat’
pū-	*u*	*k*	*pūūk*	*pūūsā*	‘belly’
dá-	a	*m*	*dáám*	*dáátà*	‘alcohol’

[10] These are also called “radicals” (see, for instance, Kröger 1992)

(65) Short forms vs. Full forms whose vowels undergo metathesis.

SF	**SE**	**CS**	**FF (Sg.)**	**FF(Pl.)**	**Gloss**
bā	i	k	*bīāk* (**bāīk*)	*bāāsā*	‘dog’
lá	i	k	*líák* (**láík*)	*láásà*	‘axe’
kpā-	i	k	*kpíák* (**kpāīk*)	*kpésà*	‘chicken’
tà	i	m	*tìàk* (**tàìk*)	*tààsà*	‘mat’
dà	i	k	*dìàk* (**dàìk*)	*dààsà*	‘price’

Aside from the complexities created by metathesis, some nouns are partially (66) or completely suppletives (67).

(66) Partial suppletives

Sg.	**Pl.**	**Gloss**
kpɔ́ŋ	*kpíínà*	guinea fowl
nààb	*nàlìmà*	chief
kūūb	*kūūnā*	funeral
wárí	*wíé*	issue

(67) Complete suppletives

jāāb ‘thing’ vs. *ŋāntā* ‘things’.

Due to all of these morphological complexities, it is impractical to parse constituents in a manner that provides a regular and consistent paradigm for many nouns.

香港大學圖書館 HKU Libraries

3.3 Morphological classes of nouns

Buli nouns belong to nine morphological classes grouped into pairs of singular – plural affixes and pronouns (cf. Kröger 1992; Akanlig-Pare 2005; Schwarz 2005; 2012). Table 10 provides the full set of morphological classes. Class affixes and pronouns partially resemble those in other Gur/Mabia languages.

Table 10: Morphological classes of nouns

Class	**Suffix**	**Prefix**	**Pron.**	**Def.**	**Func.**
1	*Ø, -ɔ(a)*	*wá-*	*wà*	*-wá*	SG
2	*-ba*	*bá-*	*bà*	*-má*	PL
3	*-ri, -di*	*ní-*	*dì*	*-ní*	SG
4	*-a, -e*	*ŋá-*	*ŋà*	*-ŋá*	PL
5	*-k, -ŋ*	*ká-*	*kà*	*-ká*	SG
6	*-sa*	*ŋá-*	*sì*	*-ŋá*	PL
7	*-k, -ŋ*	*kú-*	*kù*	*-kú*	SG
8	*-ta*	*tì-*	*tì*	*-ŋá*	PL
9	*-m, -b*	*bú-*	*bù*	*-mú*	SG

Class suffixes are inflectional for core underived native words and loaned nouns adapted into the vocabulary of Buli, but derivational for deverbal native nouns. Property nouns, a peripheral category of nouns, also bear separate suffixes from core nouns which they always lean against. These property nouns usually have similar roots as some verbs, but the direction of derivation between the two categories is difficult to determine in some instances. Suffixes of some property nouns are clearly derivational, although there are a few borderline cases.

香港大學圖書館 HKU Libraries

3.3.1 Basic (underived) nouns

The following subsections describe the nine classes of basic nouns, accounting for their morphological properties and semantic content.

3.3.1.1 Classes 1 and 2 nouns

Some members of Class 1 do not have suffixes, although *-ɔ* is emblematic of the class. Nouns in Class 1 are singular, and they form their plurals with *-ba*, as seen in (68). Members of Classes 1 and 2 are predominantly human nouns, but a few non-human loanwords (e.g. *jèènéˊ* 'onion' versus *jèènébáˊ* 'onions' > Akan) are also found in this class.

(68) Class 1 (ø, -ɔ) and Class 2 (-ba) nouns

CL.1: *ø, -ɔ*	**CL.2: *-ba***	**Gloss**
tɔ́	*tɔ́bà*	brother/sister (classificatory)
mɔ́	*mɔ́bà*	older brother/sister
yɔ́	*yɔ́bà / yɔ́á*	junior brother/sister
dɔ̄	*dɔ̄bā*	friend
chɔ̄rɔ̄	*chɔ̄rɔ̄bā*	husband
kɔ̀	*kɔ̀bà*	father
mà	*màbà*	mother

香港大學圖書館 HKU Libraries

3.3.1.2 Classes 3 and 4 nouns

Nouns in Class 3 bear the suffix *-di* or the allomorphic variant *-ri*. A few nouns in this class bear the suffix *-i*, while a few others bear no suffixes. Plural forms of some Class 3 nouns are derived by means of the suffixes *-a* and *-e*. Body part nouns are the most conspicuous members of Classes 3 and 4, but a few non-individuatable entities and collectives are also present. Example (69) lists some nouns in the two classes.

(69) Class 3 (-ri, -i, Ø) and Class 4: (-e, -a)

CL.3	**CL.4**	**Gloss**
ŋírí	*ŋíé*	'neck'
nísí(rí)	*nísà*	'hand'
bììsí(rí)	*bììsà*	'breast'
būūrī	*būūrā*	'species'
līgrī	*līgrā*	'money'
sūī	*sūē*	'temper'
kùrì	*kùè*	'hoe'
póí	*púé*	'belly'
tūrī	*tūē ~ tūrā*	'ear'
kɔ̄bī	*kɔ̄bā*	'bone'
sūmī	*sūmā*	'bean'
bēlī	*bēlā*	'river'
nyín	*nyínà*	'tooth'
tān	*tānā*	'stone'
jén	*jénà*	'egg'
wén	*wénà*	'god'
kpāī	*kpāā*	'occiput'

香港大學圖書館 HKU Libraries

3.3.1.3 Classes 5 and 6 nouns

Nouns in Class 5 bear the suffix *-k*, while a few are suffixless. The plural marker of nouns in this class is *-sa*, which derives nouns belonging to Class 6. Nouns in these two classes are semantically heterogeneous. Most of them are distinguishable as individual entities and can be counted separately. Example (70) lists some nouns in the two classes.

(70) Class 5 (-k) and Class 6 (-sa) nouns

CL.5	**CL.6**	**Gloss**
bīāk	*bāāsā*	'dog'
chīāk	*chāāsā*	'waist'
chíík	*chíísà*	'moon'
gēbīk	*gēbīsā*	'knife'
líák	*láásà*	'axe'

香港大學圖書館 HKU Libraries

3.3.1.4 Classes 7 and 8 nouns

Like Class 5 nouns, Class 7 nouns bear the suffix *-k*, and a few members are suffixless. However, here, the plural suffix is *-ta*, which derives nouns belonging to Class 8. Nouns in Classes 7 and 8 are semantically heterogeneous and mostly indefinite amorphous masses and abstract concepts that are non-individuatable and uncountable. Some animals that gather together in groups, clusters, or flocks are found in this class. Example (71) lists some nouns in the two classes.

(71) Class 7 (-k) and Class 8 (-ta) nouns

CL.7	**CL.8**	**Gloss**
gúúk	*gúútà*	'hill'
vīɔ̄k	*vāātā*	'wind'
fíɔ́k	*fáátà*	'baboon'
míík	*míítà*	'rope'
búnɔ́rúk	*búnɔ́rútá*	'chameleon'

香港大學圖書館 HKU Libraries

3.3.1.5 Class 9 nouns

Nouns in Class 9 bear the suffix *-m* or *-b*, but nouns bearing *-m* are in the vast majority. The suffix *-m* seems to have displaced *-b* in many instances, especially among young speakers. Take, for instance, the noun 'tree'. Older speakers prefer *tììb* 'tree', whereas younger speakers prefer the form *tììm* 'tree'. Members of Class 9 nouns form a homogeneous semantic group consisting of liquids and abstract entities that can rarely be counted in their own right. For instance, liquids are counted in units of their containers. Similar to Class 7 nouns, Class 9 nouns form their plurals with *-ta* (CL.8). Example (72) shows this.

(72) Class 9 (-m, -b) nouns vs. Class 8 (-ta) nouns

CL.9	**CL.8**	**Gloss**
dáám	*dáátà*	'alcohol'
kpáám	*kpáátà*	'oil'
zíím	*zíítà*	'blood'
tììm	*tììtà*	'medicine'
nyíám	*nyáátà*	'water'

香港大學圖書館 HKU Libraries

3.3.2 Derived nouns

Derived nouns, especially deverbal nouns, constitute a large fraction of items in the lexicon. A derived noun is absorbed into a class, according to the derivational (class) suffix by means of which the noun is derived. Table 11 presents the derivational functions of class suffixes. Five derivational functions, namely agentive, instrumental, abstract, infinitive/gerundive, locative, and adjectival, are performed by derived nouns.

Table 11: Derivational functions of class markers

Class	**Suffix**	**Function**
1/2	*-dɔ ~ -rɔ /-ba*	agentive
5/6	*-k, -ŋ / -sa*	instrumental, locative, adjectival
7/8	*-k, -ŋ / -ta*	instrumental, locative, adjectival
9	*-m*	abstract
*	*-ka*	infinitive/gerundive

3.3.2.1 Agentive nouns

Core members of nouns in Class 1 and Class 2 are few, of which some are kin terms. Membership of the class is, however, increased by deriving more members from verbs with the suffix *-dɔ* or its variant *-rɔ* for singular nouns. Plurals of agentive nouns are formed by attaching *-ba* to the derived noun stem. The vowels of monosyllabic stems are usually lengthened in speech (e.g. *ŋyūrɔ̄bā* [ɲū:rɔ̄bā]), and assimilation affects some elements in the derivation process. Deverbal nouns typically refer to humans (agents) who are performers of the activity denoted by the verb. Example (73) provides examples of deverbal nouns.

香港大學圖書館 HKU Libraries

(73) Agentive nouns derived from verbs

CL.1: *-dɔ/-rɔ*	**CL.2**: *-ba*	**Gloss**	**Verb**	
sāgrɔ̄	*sāgrɔ̄bā*	'teacher'	*sāgī*	'teach'
nyūrɔ̄	*nyūrɔ̄bā*	'drinker'	*nyū*	'drink'
pōndɔ̄	*pōndɔ̄bā*	'barber'	*pōm*	'barber'
bāndɔ̄	*bāndɔ̄bā*	'companion'	*bānī*	'accompany'
kpārɔ̄	*kpārɔ̄bā*	'weeder'(farmer)	*kpā*	'weed'

A few human nouns in my dataset are not derived by means of *-dɔ/-rɔ* or *-ba.* These nouns, which include *kpíŋ* 'orphan > *kpī* 'die' and *yèsìŋ* 'lunatic' > *yēsīm* 'to go insane', form their plural with *-sa* (i.e. *kpíŋsà* 'orphans' and *yèsìŋsà* 'lunatics').

3.3.2.2 Other derived nouns

The class suffixes *-k/-ŋ* convert verbs into nouns belonging to Class 5, Class 7, Class 8, and Class 9. Deverbal nouns derived through this operation typically refer to non-human entities such as objects, especially instruments, and abstract concepts. Many property nouns with adjectival functions belong here. Deverbal nouns commonly form their plurals with *-sa* or *-ta* except for property nouns and some abstract concepts. Example (74) is a list of non-agentive nouns derived from verbs.

香港大學圖書館 HKU Libraries

(74) Other derived nouns

Singular	**Plural**	**Gloss**	**Category**	**Verb**
chààsìk (CL.5)	*chààsìsà* (CL.6)	'comb'	Instrument	*chāāsī* 'comb'
gēbīk (CL.5)	*gēbīsā* (CL.6)	'knife'	Instrument	*gēbī* 'cut'
yɔ̄ān(ī) (CL.3)	*yɔ̄ānā* (CL.4)	'fruit'	Food	*yɔ̄ān(ī)* 'fructify'
dìàk (CL.5)	*dààsà* (CL.6)	'price'	Value	*dā* 'buy
nyààsìŋ (CL.5)	*nyààsìnsà* (CL.6)	'mirror'	Instrument	*nyā* 'look'
nyààsìm (CL.9)	*nyààsìntà* (CL.8)	'look'	Appearance	*nyā* 'look'
bɔ̄bīk (CL.5)	*bɔ̄bīsā* (CL.6)	'scarf'	Accessory	*bɔ̄bī* 'tie'
-bɔ̀bìŋ (CL.5)	*-bɔ̀bìŋsà* (CL.6)	'tied X	Quality	*bɔ̄bī* 'tie'
-kààsìŋ (CL.5)	*-kààsìŋsà* (CL.6)	'spoilt X'	Quality	*kāāsī* 'destroy'
gērūŋ (CL.7)	*gērūntā* (CL.8)	'trade'	Activity	*gērīm* 'trade'
gērūk (CL.7)	*gērūtā* (CL.8)	'fence'	Instrument	*gērī* 'to block'

A few nouns show clear relations with verbs in the meanings that they express. However, whether such nouns are derived from verbs or vice-versa is not obvious. These nouns and verbs include *bììk* 'language' vs. *bīīsī* 'to speak' and *wīīk* 'flute' vs. *wī* 'to call'. Some nouns also show only tonal differences, for example, *yèlìŋ 'colander'* vs. *yēlīŋ* 'sift' while others are identical or similar (e.g. *kpālīŋ* 'a fight' vs. *kpālīŋ~kpālīm* 'to fight') with minor idiolectal differences.

香港大學圖書館 HKU Libraries

3.3.3 Property nouns

Property nouns are closely related to the core nouns described in sections 3.3.1 and 3.3.2. Property nouns are modifiers that occur along with the nouns that they modify. The suffix of the modified noun is typically dropped, whereas the suffix of the property noun remains. Also, some speakers tend to substitute [i] with [u], which has created idiolectal variants for some property nouns (e.g. *-nàlìŋ* vs. *-nàlùŋ* 'nice', *-mɔ̀nìk* vs. *-mɔ̀nùk* 'red', *-pìèlìk* vs. *-pìèlùk* 'white'). Property nouns belong to Classes 5/6 and 7/8, as seen in examples (75) and (76).

(75) a. *Nú(ri)* ***-màŋ***
person.1 good.5
'A good person.'

b. *Nú-(ba)* ***-màŋ-sà***
person-2 good-6
'Good people.'

(76) a. *Làm* ***-màsī-k***
meat.9 delicious-7
'Delicious soup.'

b. *Làm-(ta)* ***-màsī-tà***
meat-8 delicious-8
'Delicious meats.'

The modified noun is sometimes not specified. In this case, the property noun is used together with *jāāb* 'thing' and its plural suppletive *ŋāntā* 'things'. Here, also, the suffixes of these generic nouns are dropped, leaving their stems *jā- 'thing'* and *ŋān-* 'things' respectively. This is illustrated with the singular–plural pairings in (77).

香港大學圖書館 HKU Libraries

(77) Compounding property nouns and *jāāb* ‘thing’ and *ŋāntā* ‘things’

a.	*jà-(b)* ***-nàlìŋ***	*ŋàn-(ta)* ***-nàlìŋ-sà***
	thing-9 beautiful.5	thing-8 beautiful-6
	‘beautiful thing’	‘beautiful things’
b.	*jà-(b)* ***-pāgrī-k***	*ŋàn-(ta)* ***-pāgrī-sā***
	thing-9 strong-5	‘thing-8 strong-6’
	‘strong thing’	‘strong things’
c.	*jà-(b)* ***-mɔ̀nì-k***	*ŋàn-(ta)* ***-mɔ̀nì-sà***
	thing-9 red-5	thing-8 red-6
	‘red thing’	‘red things’
d.	*jà-(b)* ***-pìèlì-k***	*ŋàn-(ta)* ***-pìèlì-sà***
	thing-9 white-5’	thing-8 white-6
	white thing’	‘white things’

香港大學圖書館 HKU Libraries

Property nouns do not entirely belong to Class 5/6, as shown in (78). The choice between *-sa* or *-ta* tends to be determined by the (non-)individuatability of the modified noun, but this is not a rigid rule. Speakers use *-ta* when entities are considered in packs or clusters.

(78) Compounding property nouns and other nouns.

a.	*yé-(ri)* *-mɔ̀nì-k* house-3 red-5 'red house'	*yé-(e)* ***-mɔ̀nì-sà*** house-4 red-6 'red houses'	Individuated
b.	*ye-(ri)* *-mɔ̀nù-k* house-3 red-7 'red house'	*ye-(e)* ***-mɔ̀n*ù-*tà*** house-4 red-8 'red houses'	Cluster
c.	*fɔ̀rù-(k)* *-pìèlì-k* bag-7 white-5 'white bag'	*fɔ̀rù-(tà)* ***-pìèlì-sà*** bag-8 white-6 'white bags'	Individuated
d.	*fɔ̀rù-(k)* *-pìèlù-k* bag-7 white-7 'white bag'	*fɔ̀rù-(tà)* ***-pìèlù-tà*** bag-8 white-8 'white bags'	Pack

香港大學圖書館 HKU Libraries

3.4 Number marking function of class suffixes

Class pronouns are 'third person' because they refer to persons or entities other than the speaker (first person) or the addressee (second person) who are actively engaged in a conversation. Schwarz (2005: 62) makes this distinction using the term *Kommunikatoren* 'communicators' to refer to the discourse participants and *Kommunikata* 'subjects of communication' to refer third persons or entities. This section discusses the agreement function of class pronouns. Class pronouns bear low tone, but a high tone suprareflection is commonly used to mark emphasis

Pronominal concord is semantically motivated, but this does not apply strictly in all cases. The most relevant distinction in the use of pronouns pertains to human and non-human referents. Among the singular pronouns, *wà* is typically used to refer to singular 'third person' humans, as illustrated in (79).

(79) *Wà* *lì* *ŋ̄ōōnī* *nú-(ba)-má* *míéná.*
CL.2 FUT test person-2-DEF.2 all
'He will test all the people.'

Wà is the singular human pronoun, and *bà* is the plural human pronoun. Non-human nouns take any of the remaining class pronouns i.e. *dì, kà, kù, bù, ŋà, sì,* and *tì* as concord markers. Some non-human loanwords tend to mark definiteness with *-wá* and *-má* (§ 3.8), but *wà* and *bà* are rarely used as concord markers for such nouns.

(80) ***Kù*** *lī* *nyɛ̀* *dì-lá* *lá,*
CL.7 SUB do.PFV CL.3-DIST CDM
bà *àn* *ŋmān* *jàm* *dé.*
CL.2 NEG.PFV again come.PFV here
'When it so happened, they did not come here again.'

香港大學圖書館 HKU Libraries

(81) ***ŋ̀dà*** *dàn* *yɔ̀tì,* *fì* *līg.*
CL.4 when dissolve 1SG cover
'When it [onion] dissolves, you cover it [the soup]'

Quite consistently, the pronoun *bù* also marks concord for some specific nouns, especially diseases, big animals and trees, war, and fire. In (82) *bù* anaphorically refers to 'disease'.

(82) *Tūēm-mú* *dàn* *wáàŋì* *bù* *lì*
disease-DEF.9 if spread CL.9 FUT
kō *tì* *nù-(ba)-má*
kill 1PL person-2-DEF.2
'If the disease spreads, it will kill our people.'

Concord marking by means of *si* and *ti* also shows significant distinction on the basis of individuation. For instance, whereas *tì* refers to liquids (e.g. soup, blood, water), *sì* refers to entities that can be individuated and counted.

(83) *Ti* *yāā* *sāālā* *ká=mā*
CL.8 now be.slimy FOC=PRED.EMPH
'It [okro soup] is now slimy.'

(84) *Sì* *jò* *ká* *wūūk* *pō.*
CL.6 enter.PFV FOC bush in
'They [cattle] went into a bush.'

Individual exceptions where concord is marked with specific pronouns exist. However, *kù* and *ŋà* tend to be frequently used to mark concord for various nouns across the distinct classes. Aside from marking concord for nouns of varied semantic content, *kù* additionally has 'dummy' uses (85). Similarly, *ŋà* marks concord for nouns of various semantic contents.

(85) *Kù* *à* *wūlīm* *ká=mā.*
CL.7 IPFV be.sweaty FOC=PRED.EMPH
'It is sweaty.'

3.5 Comparative-Gur perspectives on the noun classes

While Buli and other Gur languages possess noun classes, there are significant variations in the systems across languages of the family. Proto-Gur has about thirty noun classes, but it is not easy to give an exact range as research on individual languages is still developing and researchers approach the topic differently. Besides, the systems of individual languages have also evolved, requiring a substantial amount of diachronic data to fully understand them. Miehe et al. (2012) have recently reconstructed a tentative Proto-Gur noun system. In this section, I only show the correspondences between Buli noun classes and the reconstructed system (presented in Table 12) and further compare them briefly with what exists in some of Buli's closest neighbours. Prefixes and suffixes serve as class markers in many Gur/Mabia languages, except for a few (e.g. Likpakpanl) which appear to have circumfixes in addition.

Table 12: Noun classes in Buli and Proto-Gur

Number and Definiteness suffixes, and Pronouns				**Proto-Gur Noun classes**
Class	Suffix	Pro.	Def.	(Miehe, Reineke, & Winkelmann 2012)
1	*-ɔ(a)*	*wà*	*-wá* 'DEF.1'	Class 1 (*-ʊ, -a,*)
2	*-ba*	*bà*	*-má* DEF.2	Class 2 (*-ba*)
3	*-di/-ri/-i*	*dì*	*-ní* 'DEF.3'	Class 5 (*-di*)
4	*-a, -e*	*ŋà*	*-ŋá* 'DEF.4'	Class 6 (*-ŋa*)
5	*-ka*	*kà*	*-ká* 'DEF.5'	Class 12 (*-ka*)
6	*-sa*	*sì*	*-ŋá* 'DEF.4'	Class 13 (*-si*), Class 6 (*-ŋa*)*
7	*-ku*	*kù*	*-kú* 'DEF.7'	Class 15 (*-ku*)
8	*-ta*	*tì*	*-ŋá* 'DEF.4'	Class 21 (*-tu*), Class 6 (*-ŋa*)*
9	*-m/-b*	*bù*	*-mú* 'DEF.9'	Class 14 (*-bu*)

香港大學圖書館 HKU Libraries

Class 1 and Class 2 correspond to Proto-Gur Class 1 (-ʊ, -a,) and Class 2 (-ba) respectively (cf. Miehe, Reineke & Winkelmann 2012). In Proto-Gur studies and beyond, ʊ*, along with a*, is identified as Class 1, where human nouns belong. Kɔnni and other close neighbors of Buli (e.g. Dagaare, Gurene, and Kusaal) also have similar forms as Class 1 markers. In the case of Buli, Schwarz (2012) has provided U/WA as Class 1 markers. Presently, [wa], a variant that has emerged as a result of frequent diphthongisation (i.e. /ɔ/ → [wa]), is commonly heard in Sandema-Buli, whereas [ɔ] is commonly heard in Chuchuliga-Buli.

Class 3 suffix *-di* in this work is identified as Class 5 (*-di*) in Niger-Congo studies. The variant *-ri* is found in other Gur languages, for example, in Dagaare, where it functions as both a singular and a plural marker for some nouns (see Pulleyblank et al. 2024). The suffix *-i* in Buli is a new form, emerging through one of three possible processes: /-r/-drop in some nouns ending with -ri (e.g. **sūrī > sūī* 'temper'), [k]-drop in some nouns ending with the suffix *-k* (e.g. **kɔ́bík > kɔ́bí* 'bone'), or [i]-epenthesis in some nouns originally lacking a class suffix (e.g. **tɔ́g > tɔ́gí* 'termite hill). The transition is complete in some nouns, leading to certain forms (marked with the asterisks) no longer recognised or accepted by native speakers. In the reconstructed Proto-Gur system, a similar *-i* identified as Class 4 functions as a plural marker.

The suffixes *-a* and *-e*, which I designate as Class 4, are also identified differently in the Proto-Gur noun class system. In Proto-Gur studies and subsequent research, a*, alongside U*, is usually classified as Class 1. However, in this thesis, I have classified *a* as Class 4 based on the synchronic data. The form e* is usually not identified as a class marker in Gur; nonetheless, the current Buli data shows that *-e* functions as a plural suffix for nouns in Class 4.

The element *-k*, identified as both Class 5 and Class 7 in this work, is a remnant of *ka* and *ku*, which are identified in Proto-Gur and Niger-Congo studies as Class 12 (*ka*) and Class 15 (*ku*). Chuchuliga-Buli has retained the vowels in the suffixes *-ka* and *-ku*, but other Buli

香港大學圖書館 HKU Libraries

varieties have shed them. The absence of vowels makes it challenging to distinguish between the *ka* and *ku* sets of nouns on morphological grounds. However, the preservation of the vowels in their pronouns and definiteness markers offers alternative means of differentiation. Morphophonological changes affecting suffixes in Buli are commonplace in Gur languages, and in some instances, they have led to the grouping together of nouns in Proto-Gur noun classes 12 and 15.

The suffixes -*sa* (Class 6) and *ta* (Class 8) in this work correspond to the reconstructed Proto-Gur Class 13 (*si*) and Class 21 (*tu*) respectively. Prior to Miehe et al. (2012), Class 21 was referred to as *ti*. In Buli, -*sa* and -*ta* function as plural markers for nouns in Class 6 and Class 8 respectively. Notably, the presence of the low-back vowel [a] in -*sa* and -*ta* contrasts with the high vowels [i] and [u] in *ti* and *tu* of the reconstructed Proto-Gur classes. This contrast is attributed to what Miehe et al. (2012) call 'paradigmatic levelling'. In Buli, the presence of the low back [a] in -*sa* (Class 6) and -*ta* (Class 8), as opposed to the pronouns *si* (Class 6) and *tì* (Class 8), is also the result of paradigmatic levelling. The pronouns *si* and *tì* have remained unaffected by this levelling as they occur independently or as initial elements of expressions – same applies to the pronominal prefixes *si*- and *tì*-. In certain word groups, such as names of townships (e.g. *Fumbisi* or *Fumbisa*, *Siniensi* or *Siniensa*, and *Wiesi* or *Wiesa*), paradigmatic leveling is only partially complete, leading to the coexistence of -*si* and -*sa* as free variants. Meanwhile, the process is complete in words like *Bùlìsà*, which appears as *Boulsi* and *Bulba* in some of the earliest records of the people and their language. Some close relatives of Buli (e.g. Kɔnni, Safaliba, Dagbani) also have *si* and *ti* as class markers. In Dagbani, there is frequent substitution of the voiceless fricative [s] with the glottal fricative [h], resulting in the emergence of *hi* as a variant of *si* (cf. Olawsky 1999).

香港大學圖書館 HKU Libraries

The elements *-m* and *-b* (Class 9) in this work correspond to Proto-Gur Class 14 (*bu*) and other Niger-Congo systems. Except for Chuchuliga-Buli, the vowel is lost in Sandema-Buli and varieties spoken in other communities. The element *-m* may have evolved at a later stage through an assimilation process between *-bu* and noun stems. For example, there is a possibility that *nyíám-mú* 'the water', *tūēm-mú* 'the disease', and *nùìm-mú* 'the bird' were originally *nyíám-bú* 'the water' (or 'Water, it' in PGR), '*tūēm-bú* 'the disease' (or 'Disease, it…' in PGR), and *nùìm-bú* 'the bird' (or 'Bird, it…' in PGR). If this were the case, we can imagine a scenario where homorganic nasal assimilation gradually displaced [b] at a later stage.

Some singular nouns belonging to Class 9 end with *-m*, with only a handful (e.g. *chīīb* 'chick') ending with *-b* across speakers of different age groups. Some word-pairs freely alternate e.g. *kūūb* 'funeral vs. *kūūm* 'funeral' and *tììb* 'tree' vs. *tììm* 'medicine/tree', suggesting a similar change in progress. The fact that *chīīb* 'chick' is not affected by this change may be attributed to a dissimilation process maintaining the distinction between some word pairs, e.g. *chīīb* 'chick' and *chīīm* 'to fry'. The pronoun *bù* (Class 9), which has not been affected by any assimilation process, has retained its vowel to date.

Among all the class markers, *-ŋa* (Class 4), which corresponds to Proto-Gur Class 6 (*ŋa*), tends to be unique, crossing class divisions. The element *-ŋá* in Buli functions primarily as a definiteness marker and not as a plural suffix, while its counterpart *ŋà* functions as a pronoun of Class 4 nouns, which have *-a* and *-e* as plural suffixes. As a result, the morphological relationship drawn between number-marking suffixes, definiteness-marking suffixes, and pronouns cannot be extended to *ŋà* and *-ŋá*. Additionally, while some Buli nouns have *-ŋ* as their final segment, the velar nasal and *ŋa* are also found in other Gur languages. In Kɔnni, *-ŋ* is a class marker of several noun classes (Cahill 1999: 43–50), and *ŋa* is a pronoun for plural inanimate nouns in Dagbani and Kulango. The element *-ŋá* in Buli may have evolved

香港大學圖書館 HKU Libraries

through one or both of the following ways: a language-internal change causing the final velar nasal of nouns to fuse with *-a* (CL.4) or that *ŋa* has been borrowed from other Gur languages.

The suffix *-ní* (DEF.3) has a unique character, as it differs segmentally from *-ri* (a variant of *-di*) (CL.3). The element *-ní* most likely has emerged through coalescence, a process preventing the sequence *ri.ri*. The sound [r] has a precarious character, occurring only intervocally as a conditioned variant of [d]. Also, the fact that definite nouns such as *bínní* 'the seed', *sínní* 'the boom', and *tūnní* 'the ear' never occur as **bírírí*, **sírírí*, and **tūrīrí* respectively makes this assumption plausible. Considering the relation between pronouns and elements that mark definiteness, we would have expected *-ri* (or *-di*) to be attached to the indefinite forms *bírí* 'seed', *sírí* 'bee', and *tūrī* 'ear' to derive the definite forms.

The noun classes of Gur languages do not form a neat paradigm, at least they are not as neat as the classes often found in the famous Bantu family. As the discussion has shown, the classes of Buli have evolved through innovation and borrowings, and language-internal changes. The well-behaved noun class systems have undoubtedly enriched our understanding of the interesting characteristics of Niger-Congo languages and further provided us with theoretical tools and approaches for exploring Gur languages and others alike. However, while reconstructions and cross-linguistic comparisons of Niger-Congo systems have engaged linguists' attention, it is important that studies do not overlook the nitty-gritties of individual language systems.

香港大學圖書館 HKU Libraries

3.6 Combining nouns and adnonimals

Nouns, property nouns, and numerals may co-occur. In this case, the noun comes first, followed by the property, before the numeral.

3.6.1 Combining nouns and numerals

Nouns bear suffixes, whereas numerals bear pronominal prefixes determined by the semantic contents of the nouns. This is exemplified in (86).

(86) **Noun and numeral**

a. ***nú(rí)*** ***wà****-nyī* ***nú-bá*** ***bà****-nàànsì*
person.1 CL.1-one person-2 CL.2-four
'one person' 'four persons'

b. ***sí-rí*** ***dì****-nyī* ***sí-é*** ***ŋà****-yùèbì*
bee-3 CL.3-one bee-4 CL.4-six
'one bee' 'six bees'

c. ***jíírú-k*** ***kù****-nyī* ***jíírú-tá*** ***tì****-yè*
eagle-7 CL.7-one eagle-8 CL.8-two
'one eagle' 'two eagles'

d. ***nāŋ*** ***kà****-nyī* ***nāŋ-sā*** ***sì****-tà*
leg.5 CL.5-one leg-6 CL.6-three
'one leg' 'three legs.

e. ***nááb*** ***bù****-nyī* ***níígà*** ***ŋà****-nù*
cow(9) CL.9-one cattle.4 CL.4-five
'one cow' 'five cattle'

香港大學圖書館 HKU Libraries

3.6.2 Combining core nouns, property nouns, and numerals

Core nouns and property bear separate suffixes, while numerals bear prefixes largely determined by the semantics of the noun. This is shown in (87).

(87) **Core noun, property noun, and numeral**

a. ***kɔ́ŋ*** *-màŋ* ***kà-nyī*** — ***kɔ́ŋ-(sa)*** *-màŋ-sà* ***sì-yè***
tin.5 good.5 CL.5-one — tin-6 good-6 CL.6-two
'one good tin' — 'two good tins'

b. ***kpɔ́ŋ*** *pìèlì-(k)* ***kù-nyī*** — ***kpíínà*** *-pìèlì-sà* ***tù-tà***
guinea.fowl.7 white-5 CL.7-one — guinea.fowl.8 white-6 CL.8-three
'one white guinea fowl' — 'three white guinea fowls'

c. ***yé-(rí)*** *mɔ̀nì-k* ***dì-nyī*** — ***yé-(e)*** *-mɔ̀nì-sà* ***ŋà-nù***
house-3 red-5 CL.3-one — house-(4) red-6 CL.4-five
'one black house' — 'five black houses'

d. ***bí-(k)*** *-sɔ́blí-k* ***wà-nyī***[11] — ***bí-(sa)*** *-sɔ́blí-sá* ***bà-yùèbì***
child-5 black-5 CL.2-one — child-6 black-6 CL.2-six
'one black child' — 'six black children'

e. ***làm*** *fíí-k* ***bù-nyī*** — ***làm-(ta)*** *-fìì-sá* ***tì-nàànsì***
meat.9 small-5 CL.9-one — meat-(8) small-6 CL.8-four
'one small piece of meat' — 'four small pieces of meat'

[11] Also commonly *kà-nyī*

3.7 Class pronouns

Class pronouns are 'third person' because they refer to persons or entities other than the speaker (first person) or the addressee (second person) who actively engage a conversation Schwarz (2005: 62) makes this distinction using the terms *Kommunikatoren* 'communicators' to refer to the discourse participants and *Kommunikata* 'subjects of communication' to refer to third persons or entities.

Pronominal concord is semantically motivated, largely determined by whether the referent of a noun is human or non-human. While *wà and bà*, respectively, are singular plural human pronouns, *dì, kà, kù,* and *bù* are singular non-human pronouns, and *ŋà, sì,* and *tì* are plural non-human pronouns. As for non-human pronouns, there are significant irregularities as they tend to neutralise such that *kà* (CL.5) and *kù* (CL.7) refer to nouns outside their classes, with *kù* sometimes used to refer to various singular non-human singular nouns. Similarly, speakers commonly employ *ŋà* when referring to plural non-human entities within and outside Class 4, even though the other plural non-human pronouns may be used. Table 13 shows the semantic content of class pronouns. Pronouns bear high tone when they indicate emphasis, but a high tone does not always signify emphasis, as other factors can trigger tonal changes.

香港大學圖書館 HKU Libraries

Table 13: Semantic content of class pronouns

Class	Pronoun	Semantic content
1	*wà*	
2	*bà*	Human
3	*dì*	
4	*ŋà*	
5	*kà*	Non-human
6	*sì*	
7	*kù*	
8	*tì*	
9	*bù*	

The following sentences illustrate the functions of class pronouns. Note the morphological resemblance between pronouns and class suffixes in (88).

(88) a. ***Wà*** *kàn* *kūm.* ***Tɔ̄ā*** *kàn* *kūm.*
CL.1 NEG.IPFV cry sibling.1 NEG.IPFV cry
'She does not cry.' 'A sibling does not cry.'

b. ***Bà*** *kàn* *kūm.* ***Léé-bá*** *kàn* *kūm.*
CL.2 NEG.IPFV cry lady-2 NEG.IPFV cry
'They do not cry.' 'Ladies do not cry.'

Similarly, in (89), the singular pronouns *dì* (CL.3), and *kù (*CL.7*)* resemble the suffixes *-ri* (~*-di*), and *-k* respectively, while the plural pronouns *sì* (CL.6) and *tì* (CL.8) resemble the suffixes *-sa* (CL.6) and *-ta* (CL.8) respectively.

香港大學圖書館 HKU Libraries

(89) a. ***Dì*** *bè* *yá* — *Bí-**rí*** *bè* *yá.*
CL.3 lost PRF — seed-3 lost PRF
'It has gone missing.' — 'An egg has gone missing.'

b. ***Kù*** *yɔ̀tì.* — [12]*Nyààdū-**k*** *yɔ̀tì.*
CL.7 dissolve.PFV — aubergine-7 dissolve
'It dissolved.' — 'An aubergine dissolved.'

c. ***Sì*** *à* *wūsī.* — *Bāā-**sā*** *à* *wūsī.*
CL.6 IPFV bark — dog-6 IPFV bark
'They bark.' — 'Dogs bark.'

d. ***Tì*** *nùèrì.* — *Tìì-**tà*** *nùèrì.*
CL.8 finish.PFV — medicine-8 finish.PFV
'They got finished.' — 'Medicines got finished.'

The (partial) morphological resemblance between pronouns and class suffixes is not constant in all instances. This is because pronouns are selected according to the semantic content of the nouns they replace. Consider the examples in (90).

(90) a. ***Wà*** *kā=rú.* — *Bíí-**k*** *kā=rú.*
CL.1 be.located=there — child-5 be.located=there
'He is not available.' — 'A child is not available.'

b. ***Bà*** *kā=rú.* — *Bí-**sá*** *kā=rú.*
CL.2 be.located=there — child-6 be.located=there
'They are not available.' — 'Children are not available.'

[12] Akan loanword *nyàdéwá* 'aubergine'

Such (non)-resemblance is also seen in contexts where *kù* or *ŋà* universally refer to nouns belonging to various non-human entities.

(91) a. *Sì/**ŋà*** *ànnā* *Nùèn-**sá*** *ànnā.*
CL.6/CL.4 PROX.PRSTV slipper-6 PROX.PRSTV
'Here they are.' 'Here are slippers.'

b. *Kà/**kù*** *ànnā* *Míí-**k*** *ànnā.*
CL.5/CL.7 PROX.PRSTV rope-5 PROX.PRSTV
'Here it is.' 'Here is a rope.'

Kù has 'dummy' uses where it refers to abstract concepts rather than concrete entities, such as weather condition (92)a. or state (92)b.

(92) a. *Kù* *à* *wūlīm* *ká=mā.*
CL.7 IPFV be.sweaty FOC=PRED.EMPH
'It is sweaty.'

b. *Kù* *nālā.*
CL.7 be.fine
'It is fine'

香港大學圖書館 HKU Libraries

Quite consistently, *bù* 'CL.9' refers to a specific set of nouns, especially diseases, big animals and trees, war, and fire. And the pronoun *tì* 'CL.8' typically replaces plural forms of these nouns.

(93) a.

Bù	*dɔ̀à*	*sàg*	*pō.*	***Bōōsū-k***	*dɔ̀à*	*sàg*	*pō.*
CL.9	lie	bush	in	python-7	lie	bush	in
'It lies in a bush.'				'A python lies in a bush.'			

b.

Tì	*dɔ̀à*	*sàg*	*pō.*	***Bōōsū-tā***	*dɔ̀à*	*sàg*	*pō.*
CL.8	lie	bush	in	python-8	lie	bush	in
'They lie in a bush.'				'Pythons lie in a bush.'			

(94) a.

Bù	*à*	*wààŋ*	*ǹwūlī.*	***Tūē-m***	*à*	*wààŋ*	*ǹwūlī.*
CL.9	IPFV	spread	rapidly	disease-9	IPFV	sprea	rapidly
'It spreads rapidly'				'A disease spreads rapidly.'			

b.

Tì	*à*	*wààŋ*	*ǹwūlī.*	***Tūē-tā***	*à*	*wààŋ*	*ǹwūlī.*
CL.8	IPFV	spread	rapidly	disease-8	IPFV	spread	rapidly
'They spread rapidly'				'Diseases spread rapidly.'			

(95) a.

Bù	*à*	*dē*	*yé-rí.*	***Bòlí-m***	*à*	*dē*	*yé-rí.*
CL.9	IPFV	consume	house-3	fire-9	IPFV	consume	house-3
'It consumes a house.'				'A consumes a house.'			

b.

Tì	*à*	*dē*	*yé-ri.*	***Bò(lí)-tá***	*à*	*dē*	*yé-rí.*
CL.8	IPFV	consume	house-3	fire-8	IPFV	consume	house-3
'They consume a house.'				'Fires consume a house.'			

香港大學圖書館 HKU Libraries

3.8 Definiteness markers

Most of the morphological elements that mark definiteness resemble pronouns. In terms of segments, there is a clear correspondence between the singular suffixes *-wá, -ká, -kú* which mark definiteness and the singular pronouns *wà, kà,* and *kù*; only the pairs *-ní* vs. *dì* and *-mú* vs. *bù* do not show this morphological resemblance. As for marking definiteness on plural nouns, only the elements *-má* and *-ŋá* are used. Here, too, the definiteness marker *-ŋá* resembles the pronoun *ŋà,* whereas *-má* is distinct from *bà*. The element *-má* is restricted to a specific set of human nouns, mostly kin terms, whereas *-ŋá* neutrally marks definiteness on various nouns. Table 14 presents the definiteness markers along with some examples. Class suffixes are typically dropped, especially in plural human nouns where the suffix *-wá* is never realised. Assimilation and phonotactic changes also affect some segments in the derived definite forms.

Table 14: Class pronouns vs. Definiteness markers

Cl.	Pro.	Suf.	Def.	Noun	Singular definite	Plural Definite	Gloss
1 2	*wa* *bà*	*-Ø/ɔ(a)* *-ba**	***-wá*** ***-má***	*mà* mother	*mà-**wá*** mother.1-DEF.1	*mà-(ba)-**má*** mother-2-DEF.2	the mother(s)
				dɔ̄ friend	*dɔ̄-**wá*** friend.1-DEF.1	*dɔ̄-(ba)-**má*** friend-2-DEF.2	the friend(s)
				pōk wife	*pō(k)-**wá*** wife.1-DEF.1	*pō-(ba)-**má*** wife-2-DEF.2	the wife/wives
				zúé thief	*zúé-**wá*** thief.1-DEF.1	*zúé-(ba)-**má*** thief-2-DEF.2	the thief/thieves
				núrí person	*nú(ri)-**wá*** person.1-DEF.1	*nú-(ba)-**má*** person-2-DEF.2	the person(s)
3 4	*di* *ŋa*	*-ri/-di* *-a/-e*	***-ní*** ***-ŋá***	*sírí* bee	*sí(n)-**ní*** bee.3-DEF.3	*sí-é-**ŋá*** bee-4-DEF.4	the bee(s)
				bēlī 	*bē(n)-**ní*** river.3-DEF.3	*bēl-ā-**ŋá*** river-4-DEF.4	the river(s)
				kùrì 	*kù(n)-**ní*** hoe.3-def.3	*kù-è-**ŋá*** hoe-4-DEF.4	the hoe(s)
				tān 	*tān-**ní*** stone.3-DEF.3	*tān-ā-**ŋá*** stone-4-DEF.4	the stone(s)
				wén 	*wén-**ní*** sky.3-DEF.3	*wén-á-**ŋá*** sky-4-DEF.4	the sky/skies

香港大學圖書館 HKU Libraries

5 6	*ka* *si*	*-k/-ŋ* *-sa*	***-ká*** ***-ŋá*(4)**	*bɔ̀nīŋ* donkey	*bɔ̀nīŋ-**ká*** donkey.5-DEF.5	*bɔ̀nīŋ-sā-**ŋá*** donkey-6-DEF.4	the donkey(s)
				bīāk dog	*bīā-(k)-**ká*** dog-(5)-DEF.5	*bāā-sā-**ŋá*** dog-6-DEF.4	the dog(s)
				chíík moon	*chíi-(k)-**ká*** moon-5-DEF.5	*chíí-sá-**ŋá*** moon-6-DEF.4	the moon(s)
				tɛ̄ŋ land	*tɛ̄ŋ-**ká*** land.5-DEF.5	*tɛ̄ŋ-sā-**ŋá*** land-6-DEF.4	the land(s)
				nāŋ leg	*nāŋ-**ká*** leg.5-DEF.5	*nāŋ-sā-**ŋá*** leg-6-DEF.4	the leg(s)
7 8	*ŋà*	*-k/-ŋ* *-ta*	***-kú*** ***-ŋá*(4)**	*jíírúk* eagle	*jíírú-(k)-**kú*** eagle-7-DEF.7	*jíírú-tá-**ŋá*** eagle-8-DEF.4	the eagle(s)
				kpɔ́ŋ guineafowl	*kpɔ́ŋ-**kú*** g/fowl.7-DEF.7	*kpííná-**ŋá*** g/fowl.8-DEF.4	the guinea fowl(s)
				kōlūk testicle	*kōlū-(k)-**kú*** testicle-7-DEF.7	*kōlū-tā-**ŋá*** testicle-8-DEF.4	the testicle(s)
				gūūk hill	*gūū-(k)-**kú*** hill-7-DEF.7	*gūū-tā-**ŋá*** hill-8-DEF.4	the hill(s)
				fɔ̀rùk bag	*fɔ̀rù-(k)-**kú*** bag-(7)-DEF.7	*fɔ̀rù-tà-**ŋá*** bag-8-DEF.4	the bag(s)
9	*bu*	*-m/-b* *-ta*(8)	***-mú*** ***-ŋá*(4)**	*kpáám* oil	*kpáá-(m)-**mú*** oil-9-DEF.9	*kpáá-tá-**ŋá*** oil-8-DEF.4	the (X-es of) oil
				zíím blood	*zíí-(m)-**mú*** blood-9-DEF.9	*zíí-tá-**ŋá*** blood-8-DEF.4	the (X-es of) blood
				tììm medicine	*tìì-(m)-**mú*** medicine-9-DEF.9	*tìì-tà-**ŋá*** medicine-8-DEF.4	the (X-es of) medicine
				zóm flour	*zó-(m)-**mú*** flour-9-DEF.9	*zúé-tá-**ŋá*** flour-8-DEF.4	the (X-es of) flour
				bòlím fire	*bòlì-(m)-**mú*** fire-9-DEF.9	*bò(lì)-tà-**ŋá*** fire-8-DEF.4	the (X-es of) fire

The fact that similar elements serve as pronouns and definiteness markers is not peculiar to Buli. For instance, Supyire, a Senufo language spoken in southeastern Mali, has elements that fulfil both roles (see Carlson 1994). As can be seen in Table 14, in the present state of Buli, definiteness markers show significant segmental and tonal differences compared to pronouns.

Diachronic data is lacking to explore the likely etymological relation between definiteness markers and pronouns. Schwarz, nonetheless, already surmises that constructions that marked definiteness in Proto Buli-Kɔnni were something like 'axe, it ...' or 'baboons, they ...', with the pronoun then turned into a suffix of definiteness as an innovation. This assertion implies that constructions like (96)a and (97)a evolved from (96)b and (97)b respectively.

香港大學圖書館 HKU Libraries

(96) a. *Būūk-**kú*** *chàlì.*
goat.7-DEF.7 escape.PFV
'The goat escaped.'

b. *Būūk,* ***kù*** *chàlì.*
goat.7 CL.7 escape.PFV
'Goat, it escaped.'

(97) a. *Léé-**wá*** *kàn* *kō* *bīāk.*
lady.1-DEF.1 NEG.IPFV kill dog.5
'The lady does not kill a dog.'

b. *Léé,* ***wà*** *kàn* *kō* *bīāk.*
lady.1 CL.1 NEG.IPFV kill dog.5
'Lady, she does not kill a dog.'

The morphological resemblance between pronouns and definiteness markers suggests an etymological relationship between the two categories. If definiteness markers evolved from pronouns, then the evolution must have been further accompanied by assimilation, which accounts for the observed differences between the two in the synchronic state of the language.

(98) a. *Chìn-**ní*** *mɔ̀bì* *yá.*
calabash.3-DEF.3 break PRF
'The calabash has broken.'

b. *Chin,* ***dì*** *mɔ̀bì* *yá.*
calabash.3 CL.3 break PRF
'Calabash, it has broken.'

香港大學圖書館 HKU Libraries

(99) a. *Wá-(rí)-**ní*** *pāgrā* *ká=mā.*
issue-3-DEF.3 be.difficult FOC=PRED.EMPH
'The issue is really difficult.'

b. *Wá-rí,* ***dì*** *pāgrā* *ká=mā.*
issue-3 CL.3 be.difficult FOC=PRED.EMPH
'Issue, it is really difficult.'

3.8.1 Marking definiteness

Bare nouns have indefinite or generic references, as exemplified in (100) and (101).

(100) ***Nídɔ̄*** *lī* *và* *jàm*
man.1 FOC follow.PFV come
'A MAN accompanied (him) to come.'

(101) ***Nídɔ̄*** *ká* *nídɔ̄.*
man.1 FOC man.1
'A man is A MAN.'

As (102)a. and (102)b. illustrate, when nouns are marked for definiteness, they express the meaning that the discourse participants are familiar with the referent. The referent is recognisable by the speaker and the addressee.

(102) a. *tì* ***tūēm-mú*** *kán* *yìg* *bí-lɔ̀ɔ̀-tà*
CONN disease.9-DEF.9 NEG.IMP attack child.5-little-8
'… so that the disease does not attack little children.'

b. ***Wɔ̄g-tā-ŋá*** *lì* ***sùnkpààm-mú*** *vààsì.*
sabdafirra-8-DEF.4 and [13]groundnut.9-DEF.9 boil.PFV
'The sabdafirra [vegetable] and the groundnut boiled (…).'

[13] 'Groundnut' is equivalent to 'peanut'.

香港大學圖書館 HKU Libraries

3.8.2 Special cases with definiteness marking

Exceptionally, some singular and plural non-human loan nouns take *-wá* and *-má* as definiteness markers. This is exemplified in (103) and (104).

(103) a. ***Jèènéwá*** *kàn* *yɔ̄tī* *míéná.*
onion.1-DEF.1 NEG.IPFV dissolve entirely
'The onion does not dissolve entirely.'

b. ***Jèènébámá*** *kàn* *yɔ̄tī* *míéná.*
onion-2-DEF.2 NEG.IPFV dissolve entirely
'The onions do not dissolve entirely.'

(104) a. *Tì* *lì* *līg* ***sùkúúwá*** *mɛ̄.*
1PL FUT close school.1-DEF.1 also
'We will close down the school also.'

b. *Tì* *lì* *līg* ***sùkúúbámá*** *mɛ̄.*
1PL FUT close school-2-DEF.2 also
'We will close down the schools also.'

香港大學圖書館 HKU Libraries

Although optional, *wá* is frequently used together with the temporal nouns *dìēm* ‘yesterday’ and *dàām* ‘a few days ago’ Compare each pair of sentences in (105) and (106).

(105) a. ***Dìēm*** *dāā* *yàbà* *dāī.*
yesterday NEG.FOC market.4 day.3
‘Yesterday was not a market day.’

b. ***Dièm-wá*** *dāā* *yàbà* *dāī.*
yesterday-DEF.1 NEG.FOC market.4 day.3
‘Yesterday was not a market day.’

(106) a. *Bà* *jàm* *ká* ***dàām.***
CL.2 come.PFV FOC few.days.ago
‘They came a few days ago.’

b. *Bà* *jàm* *ká* ***dààm-wá.***
CL.2 come.PFV FOC few.days.ago-DEF.1
‘They came three days ago.’

香港大學圖書館 HKU Libraries

The suffix *-má* can be added to personal names to express associativity, which indicates that an activity is carried out by or affects an individual along with their colleagues (107).

(107) a. ***Àtéŋ-má*** *jò* *bò=ó* *dɔ̀k.*
NAME-DEF.2 enter.PFV be.located=FOC room.7
'Ateng, together with his colleagues, has gone to stay in the room.'

b. *(...)* *tì* *wà* *tùsì* *Àbìlí-**má*** *bàsì.*
(…) CONN CL.1 yank.PFV NAME-DEF.2 put.away
'(…) and he yanked Abili, along with Abili's colleagues, away.'

In noun phrases consisting of core nouns and property nouns, definiteness is marked on the property nouns. The suffixes *-ká* and *-kú* mark singular, whereas *-ŋá* marks plural.

(108) a. ***Sà-pòlìŋ-ká*** *dàn* *vààsì,* *fi* *pā*
millet.gruel.9-whisked.5-DEF.5 when boil 2SG take
nyá-túílí-ká *nyò=rú.*
water.9-hot.5-DEF.5 pour.into=there
'When the whisked millet gruel boils, you pour water into it.'

b. *Bábátù* *tùsì* ***nípò-bìlì-sà-ŋá*** *lì*
NAME push.PFV woman.1-young-6-DEF.4 and
bí-lɔ̀ɔ̀-tà-ŋá *lì* ***nú***[14]***-sòm-à-ŋá*** *lɔ̀nsì.*
child.5-little-8-DEF.4 and person.1-hoary-4-DEF.4 put.away
'Babatu pushed aside the young women and the little children, along with their mothers.'

[14] Usually pronounced [**ní**]

3.9 First and Second person pronouns

First and second person pronouns are not distinguished by morphological case, but new variants have evolved that are restricted to subject or object slots. These new variants are: a) the first-person singular pronouns *m=* and *mù*, which are respectively restricted to the subject and object slots, and b) the second-person singular pronoun *fù*, which is restricted to the object slot. To indicate emphasis, a high tone replaces the low tone of the CV first-person singular forms (i.e., *mì*, *mù*, *fì*, and *fù*). However, a high tone on these forms does not always signify emphasis, as other factors can trigger tonal changes. As for the first-person pronouns (*tì* and *tàmá*) and the second-person plural pronouns (*nì* and *nàmá*), the bi-morphemic forms (*tàmá* and *nàmá*) are typically used in subject or object slots to signify emphasis. A high tone on the mono-morphemic variants (*tí* and *nî*) indicates tonal changes at the syntactic level, as these forms are restricted to the object slot. In addition to their emphatic use, the bi-morphemic forms convey inclusionary and exclusionary meanings: *tàmá* indicates inclusivity, referring to a speaker's involvement in an event, while *nàmá* indicates exclusivity, referring to a speaker's exclusion from an event. The referents of *tàmá* and *nàmá* are usually subsets of a group from which the speaker is included or excluded. Table 15 presents the pronouns and their syntactic slots. Only the discourse pragmatic functions Inclusive (INCL) and Exclusive (EXCL) are indicated this thesis's glosses.

香港大學圖書館 HKU Libraries

Table 15: Forms and Functions of first and second person pronouns

Form	Subject	Object	Gloss
mì~	✓	✓	1SG
m=	✓	✗	1SG
mù	✗	✓	1SG
fì	✓	✓	2SG
fù	✗	✓	2SG
tì	✓	✓	1PL
tàmá	✓	✓	1PL.INCL
nì	✓	✓	2PL
nàmá	✓	✓	2PL.EXCL

The following sentences illustrate the use of *mì* and *m=* in a subject slot:

(109) a. ***Mì*** ***à*** *dàm* *bú* *ká* *màgà.* [mà:…]
1SG IPFV stir it FOC little
'I stir it a little.'

b. ***M̀*** *dàm* *bú* *ká* *màgà.* [ǹ-dàm…]
1SG stir.PFV it FOC little
'I stirred it a little.'

The element ***mí*** typically marks emphasis, indicating the speaker as the focus rather than the listener or any possible alternatives. The following examples illustrate the occurrence of ***mí*** in subject and object slots.

香港大學圖書館 HKU Libraries

(110) a. ***Mí*** *tíírí* *bá* *ká=mā.*
1SG stop.PFV CL.2 FOC=PRED.EMPH
'I (not anyone) stopped them indeed.'

b. *Tūēm-mú* *dàn* *yìg* ***mí*** *(...)*
disease.9-DEF.9 if attack 1SG
'If the disease attacks ME (not you) ...'

The elements *mù* and *mú* occur only in the object slot. Most likely, they evolved at a later stage when [i] was frequently replaced with [u] in object position.

(111) a. *Tàŋbàn-ní* *kàn* *sīāg* *á* *tɛ̄* ***mù***.
earthshrine.3-DEF.3 NEG.FUT agree IPFV give 1SG
'The earthshrine will not agree [to my intentions].'

b. *Bà* *ŋàrì* *nyíám* *tɛ̀* ***mú***
CL.2 fetch.PFV water.9 give 1SG
'They fetched water for me.'

Fì may occupy the subject or the object slot, as illustrated in (112).

(112) a. *Fì* *lì* *kūrī* *jɔ́ŋ-kú.*
2SG FUT pound dawada.7-DEF.7
'You will pound the dawada.'

b. *Wà* *àn* *nyā* ***fì***.
CL.1 NEG.PFV see 2SG
'He did not see you.

香港大學圖書館 HKU Libraries

Fí indicates emphasis on a referent and may occur in a subject or object slot, as (113) shows.

(113) a. ***Fí*** *lì* *kūrī* *jɔ́ŋ-kú.*
2SG FUT pound dawadawa.7-DEF.7
'YOU (not anyone) will pound the dawadawa.'

b. *Wà* *àn* *nyā* ***fí.***
CL.1 NEG.PFV see 2SG
'He did not see YOU (but he saw us).'

The forms *fù* and *fú* may have developed at a later stage, through frequent substitution of [i] with [u]. They occur only in an object slot, as illustrated in (114).

(114) a. *Wà* *nàgì* ***fú.***
CL.1 beat.PFV 2SG
'He beat you.'

b. *Wà* *àn* *nàgí* ***fù.***
CL.1 NEG.PFV beat 2SG
'He did not beat you.'

香港大學圖書館 HKU Libraries

The elements *tì* and *nì* can be used as subject or object, (115) and (116) show.

(115) a. ***Tì*** *sìtì* *bá-lá* *míéná.*
1PL silence.PFV CL.2-DIST all
'We silenced all those (people).'

b. *Bábátù* *àn* *màárí* ***tì.***
NAME NEG.PFV help 2PL
'Babatu did not help us.'

(116) a. ***Nì*** *kàn* *vūūgī.*
2PL NEG.FUT survive
'You will not survive.'

b. *Léé-wá* *kàn* *tùlísí* ***nì.***
lady.1-DEF.1 NEG.FUT mind 2PL
'The lady will not mind you.'

The bi-morphemic elements primarily *tàmá* and *nàmá* express emphasis, but they also carry inclusionary and exclusionary meanings respectively. *Tàmá*, on the one hand, indicates that a speaker and specific individuals within a group are involved in an activity while the others are excluded (117). *Nàmá*, on the other hand, indicates that some members within a group are involved in an activity, but not the speaker and certain individuals (118). As the examples show, *tàmá* and *nàmá* may occupy the subject or object slot.

香港大學圖書館 HKU Libraries

(117) a. ***Tàmá*** *kàn* *lō* *yòò?*
1PL.INCL NEG.IPFV fall INTJ
'WE [Bulisa, not other tribes] cannot be defeated.'

b. *Bábátù* *tɔ̄m-mú* *àn* *bàgí* ***tàmá.***
NAME archer.9-DEF.9 NEG.PFV be.capable 1PL. INCL
'Babatu's warriors could not [defeat] US.'

(118) a. ***Nàmá*** *kàn* *gɔ̄ā?*
2PL.EXCL NEG.IPFV sleep
'Do YOU not sleep?'

b. *Kànbòŋ-sà-ŋá* *kàn* *zūrī* ***nàmá.***
southerner-6-DEF.4 NEG.IPFV respect 2PL.EXCL
'The southerners do not respect YOU.'

Regarding the etymology of the *tàmá* and *nàmá,* they must have evolved in two stages. The first is a fusion of the elements *tì* and *nì* with *má* 'DEF.2' to derive *tìmá* and *nìmá* at an earlier stage. The second stage is a total assimilation affecting [i] in *tìmá* and *nìmá* to become [a], resulting in *tàmá* and *nàmá* which are presently used for emphasis. Neither *tì* nor *nì*, nor their high-toned forms **tí* and **ní*, are used as emphatic pronouns. Thus, compared to the other pronouns whose emphatic forms are realised on a high tone, *tì* and *nì* exceptionally have complex emphatic forms.

In Gur linguistics, several pronouns are usually listed, categorised, and labelled with terms such as 'emphatic vs. non-emphatic', 'deficient/weak vs. strong', 'neutral', etc., depending on the theoretical or descriptive goals of the work

香港大學圖書館 HKU Libraries

3.10 **Relative pronouns**

Relative pronouns are formed by attaching the relativiser *-i* to pronominal prefixes of the relativised nouns. The derived forms function as relative pronouns for modifying (pro-)nominals, but, depending on their syntactic contexts, they also have indefinite and demonstrative uses. In speech, the vowel of the class prefix is lengthened, and the suffix of the noun being modified is typically dropped.

Table 16: Relative pronouns

Class	Relative pronoun
1	*wáí*
2	*báí*
3	*díí*
4	*ŋíí*
5	*káí*
6	*síí*
7	*kúí*
8	*tíí*
9	*búí*

香港大學圖書館 HKU Libraries

The elements in Table 12 function as indefinite pronouns and demonstrative pronouns, as exemplified

(119) ***Wá-í*** *kán* *chàlì.*
CL.1-REL NEG.IMP escape
'Nobody should escape.'

(120) ***Wá-í*** *dàn* *chàlì,* *tì* *tɛ̄ŋ-ká* *lì* *lō.*
CL.1-REL if escape 1PL land.5-DEF.5 FUT fall
'If anyone ecapes, our town will be defeated.'

(121) *Tì* *zē* ***dí-í*** *tì* *tàmá=á* *tì* *nyɛ̄.*
1PL not.know CL.3-REL CONN 1PL.INCL=COMP 1PL do
'We do not know what to do.'

(122) *Nàmá* *sēb* ***dí-í*** *nyīng* *a?*
2PL.EXCL know CL.3-REL reason SP
'Do you know why?'

香港大學圖書館 HKU Libraries

Some of the elements in the table can be used with singular pronouns (i.e., *kà kái, dì díí, kù kúí,* and *bù búí*) and plural pronouns (i.e. *sì síí, ŋà ŋáí,* and *tì tíí*) to indicate an entity within a group of non-human entities. These must be singular – singular or plural – plural pairings.

(123) *Tɔ̄grī* ***kù*** ***kú-í.***
slaughter CL.7 CL.7- REL
'Slaughter any (of the goat).'

(124) *Bà* *à* *dē* ***tì*** ***tí-í.***
CL.2 IPFV eat CL.8 CL.8-REL
'They eat any of them (the soups).'

(125) *Nì* *tīn* *pà* *ŋà* *ŋá-í* *ŋɔ̀bì.*
2PL just take CL.4 CL.4-REL chew
'(You should) just take any (pl.) of them and chew them.'

As for human nouns, it is possible to have plural – plural pairings or plural – singular pairings to expresss similar meanings as in (123) - (124). This is illustrated in (126) - (130).

(126) ***Bà*** ***wá-í*** *kā* *nyīŋ-yɔ̀gsá..*
CL.2 CL.1- REL not.have body-coolness.4
'None of them is healthy.'

(127) *Bábátù* *àn* *bàsí* ***bà*** ***wá-í.***
NAME NEG.PFV spare CL.2 CL.2-REL
'Babatu did not spare any of them.'

香港大學圖書館 HKU Libraries

(128) ***Bà*** ***bá-í*** *dàn* *chàlì,* ***tì*** *tɛ̄ŋ-ká* *lì* *lō.*
CL.2 CL.2-REL if escape 1PL land.5-DEF.5 FUT fall
'If some of them ecape, our town will be defeated.'

(129) ***Nì*** ***wá-í*** *kán* *chàlì.*
2PL CL.1-REL NEG.IMP escape
'None of you (sg.) should esape.'

(130) ***Nì*** ***bá-í*** *jō* *yé-é* *pō.*
2PL CL.2-REL enter.IMP house-4 in
'Some of you should enter households.'

The element ***wáí*** can be repeated to in negative constructions like (131) to indicate 'nobody' or 'anybody'.

(131) *Wá-í* *wá-í* *kā* *sàg-ní* *pō.*
CL.1 CL.1-REL not.available forest.3-DEF.3 in
'There is no one in the forest.'

(132) *Tàmá* *zē* *wá-í* *wá-í.*
1PL.INCL not.know CL.1-REL CL.1-REL
'We do not know anyone.'

In their function as relative pronouns, the elements in Table 12 modify are used independently or with an explicitly specified noun being modified. Compare each pair of sentences in (133) – (136). The general subordinator *lī* and the clausal determiner demonstrative *lá* are involved in relativisation. The following sentences show the context and use of the elements in Table 12 as relative pronouns.

香港大學圖書館 HKU Libraries

(133) a. ***Nídɔ́*** ***wá-í*** *lī* *chàlì* *lá*

man.1 CL.1-REL SUB escape.PFV CDM

kpì=í=mā

die.PFV=FOC=PRED.EMPH

'The man who escaped died.'

b. ***Wá-í*** *lī* *chàlì* *lá*

CL.1-REL SUB escape.PFV CDM

kpì=í=mā

die.PFV=FOC=PRED.EMPH

'The one who escaped died.'

(134) a. ***Nídɔ́-(ba)*** ***bá-í*** *lī* *chàlì* *lá*

man-2 CL.2-REL SUB escape.PFV CDM

kpì=í=mā

die.PFV-FOC=PRED.EMPH

'Those men who escaped died.'

b. ***Bá-í*** *lī* *chàlì* *lá*

CL.2-REL SUB escape.PFV CDM

kpì=í=mā

die.PFV=FOC=PRED.EMPH

'Those men who escaped died.'

香港大學圖書館 HKU Libraries

(135) a. ***ŋmán*** ***dí-í*** *lī* *kààsì* *lá* *ǹnā.*
okro.3 CL.3-REL SUB spoil.PFV CDM PROX.PRSTV
'Here is the okro that is spoilt.'

a. ***Dí-í*** *lī* *kààsì* *lá* *ǹnā.*
CL.3-REL SUB spoil.PFV CDM PROX.PRSTV
'Here is the one that is spoilt.'

(136) a. ***ŋmán-(á)*** ***ŋá-í*** *lī* *kààsì* *lá* *ǹnā.*
okro-4 CL.4-REL SUB spoil.PFV CDM PROX.PRSTV
'Here are the okra that are spoilt.'

b. ***ŋá-í*** *lī* *kààsì* *lá* *ǹnā.*
CL.4-REL SUB spoil.PFV CDM PROX.PRSTV
'Here are the okra that are spoilt.'

If a property noun is present, the elements serving as relative pronouns follow them. The semantic content of the noun determines the choice of the relative pronoun, although ease of articulation often causes the final sound of the property noun to influence the selection of the relative pronoun[15]. The sentences in (137) and (138) are some examples. The suffixes of both the core and property nouns are frequently dropped in speech.

香港大學圖書館 HKU Libraries

[15] This is facilitated by assimilation and contraction in rapid speech which usually affects suffixes of property nouns and prefixes. For example, the expressions *nídɔ́-gélí**k** **w**ái* vs. *nídɔ́ gélí**k** **k**á-í*, *bí-sɔ́blí**k** **w**á-í* vs. *bí-sɔ́blí**k** **k**á-í*, and *ŋmán kòsù**k** **d**í-í* vs. *ŋmán-kòsù**k** **k**ú-í* are used interchangeably. Similarly, *nídɔ́(ba)-gélísá bái* vs. *nídɔ́(ba)-gélí-(sá) síí*, and *bí-sɔ́blí-sá bái* vs. *bí-sɔ́blí-**sá** **sí**-í* are used interchangeably with no meaning differences.

(137) a. ***Nídɔ́*** *gélí-(k)* ***wá-í*** *lī* *chàlì* *lá*

man.1 short-5 CL.1- REL SUB escape.PFV CDM

kpì=í=mā.

die.PFV=FOC=PRED.EMPH

'The short man who escaped died.'

b. ***Nídɔ́-(ba)*** *gélí-(sa)* ***bá-í*** *lī* *chàlì* *lá*

man-2 short-6 CL.2-REL SUB escape.PFV CDM

kpì=í=mā

die.PFV=FOC=PRED.EMPH

'Those short men who escaped died.'

(138) a. ***ŋmán*** *kòsù-(k)* ***dí-í*** *lī* *kààsì* *lá*

okro.3 dry-7 CL.7-REL SUB spoil.PFV CDM

ǹnā

PROX.PRSTV

'Here is the dry okro that is spoilt.'

b. ***ŋmán-(a)*** *kòsù-(k)* ***ŋá-í*** *lī* *kààsì* *lá*

okro-4 dry-7 CL.4-REL SUB spoil.PFV CDM

ǹnā.

PROX.PRSTV

'Here are the okra that are spoilt.'

香港大學圖書館 HKU Libraries

The presence of both property nouns and (lower) numerals creates even more complex constructions, because these two categories require semantically determined prefixes different than the suffixes of the core noun and the property noun. This is illustrated in (139) and (140).

(139) a. ***Nídɔ̀*** *gélí-(k)* ***wà****-nyī* ***wá****-í* *lī* *chàlì*
man.1 short-5 CL.1-one CL.1-REL SUB escape.PFV
lá *kpì=í=mā*
CDM die.PFV=FOC=PRED.EMPH

'The short man who escaped died, indeed.'

b. ***Nídɔ̀-(ba)*** *gélí-(sá)* ***bà****-yè* ***bá****-í* *lī*
man-2 short-6 CL.2-two CL.2-REL SUB
chàlì *lá* *kpì=í=mā.*
escape.PFV CDM die.PFV=FOC=PRED.EMPH

'Those two short men who escaped died.'

(140) a. ***Ŋmán*** *kòsù-(k)* ***dì****-nyī* ***dí****-í* *lī* *kààsì*
okro.3 dry-7 CL.3-one CL.3-REL SUB spoil.PFV
lá *ǹnā.*
CDM PROX.PRSTV

'Here is the dry okro that is spoilt.'

b. ***Ŋmán-(a)*** *kòsù-(ta)* ***ŋà****-nū* ***ŋá****-í* *lī* *kààsì*
okro-4 dry-8 CL.4-five CL.4-REL SUB spoil.PFV
lá *ǹnā.*
CDM PROX.PRSTV

'Here are the five okra that are spoilt.'

Assimilation and contraction sometimes occur in constructions like (139) and (140), usually between the property noun and the prefix of the numeral. These changes often begin from the suffix of the property noun and influence the selection of the prefixes of the numeral and the relative pronoun. For example, the presence of *-ta* in *ŋmán(a) kòsù-tà ŋà-nàànsi ŋáí ...* 'the four dried okra that...' creates the alternative *ŋmán(a) kòsù-**tà tì**-nàànsi **tíí** ...* 'the four dried

香港大學圖書館 HKU Libraries

okra that…'. Yet another alternative, *ŋmán(a) kòsì-**sà sì**-nàànsi **síí***, will typically be employed by speakers who prefer *kòsìk/kòsìsà* to *kòsùk*/*kòsùtà*.

Relative clauses modify first and second person for emphasis, as illustrated in (141) – (144).

(141) ***Fí*** ***wá-í*** *lī* *lìg* *suuk-kú*
2SG CL.1- REL SUB close.PFV way.7-DEF.7
lá, *lāg* *kú.*
CDM open.IMP CL.7

'You, who have closed the way, open it.'

(142) ***Mí*** ***wá-í*** *lī* *sèb* *lá,*
1SG CL.2-REL SUB know CDM
kàn *jō* *nú-(ba)* *bɔ́rí* *pō.*
NEG.FUT enter person-2 many in

'I, who am aware, will not join large crowd.'

(143) ***Nàmá*** ***bá-í*** *lī* *tùèsì* *tììm-mú*
2PL.EXCL CL.2-REL SUB receive.PFV medicine.9-DEF.9
lá, *kūlī.*
CDM go.home.IMP

'You (pl), who received the medicine, go home.'

(144) ***Tàmá*** ***bá-í*** *lī* *wàrì* *lá,*
1PL.INCL CL.2-REL SUB remain.PFV CDM
àn *sìàgí* *yà*
NEG.PFV succumb PRF

'We who remained (at home) did not succumb.'

香港大學圖書館 HKU Libraries

3.11 **Contrastive marker *ǹ-***

The element *ǹ-* is used with emphatic forms of pronouns as well as the demonstrative *lá* to explicitly indicate preference or distinction between two items or ideas[16]. The derived form implies a choice between two options, a clarification of focus, or an expression of differentiation. The use of *ǹ-* is illustrated in (145) - (148).

(145) *Mí* *à* *yāā* *ká* *góó(ri)-ní* *dé,*
1SG IPFV like FOC cola.nut.3-DEF.3 here
dāā ***ǹ-dì-lá***
NEG.FOC CONTR-CL.3-DIST

'I like this colanut, not that (between the two colanuts).'

(146) *Tì* *lì* *tèbì* *tūēm-mú* *dé,*
1PL FUT treat disease.9-DEF.9 this
dāā ***ǹ-bù-lá****.*
NEG.FOC CONTR-CL.9-DIST

'We will treat this disease, not that.'

(147) ***Ǹ-bà-lá*** *àn* *ŋmànί* *yà.*
CONTR-CL.2-DIST NEG return PRF

'Those (not the others) have not returned.'

(148) ***Ǹ-tì-lá*** *bāāsā.*
CONTR-CL.8-DIST be.tender

'The other ones (not these) are tender.'

[16] The high tone of the emphatic pronoun is optionally realised as Low due to LTS from the contrastive marker.

香港大學圖書館 HKU Libraries

Nouns are optionally – and redundantly – used together with elements that mark contrast, as exemplified in (149).

(149) a.

Nú-(ba)	***ǹ-bà-lá***	*àn*	*ŋmànî*	*yà.*
person-2	CONTR-CL.2-DIST	NEG	return	PRF

'Those people (not the others) have not returned.'

b.

Jèn-(ta)	***ǹ-tì-lá***	*bɔ̀bì*	*ká=mā.*
soup-8	CONTR-CL.8-DIST	become.viscous	FOC=PRED.EMPH

'The other soups (not these) have really become viscous.'

Pronouns are sometimes used in place of the (redundant) nouns to derive the constructions *di ǹdìlá* 'this, not that', *bù ǹ-bù-lá* 'this, not that', *kù ǹ-ku-lá* 'this, not that', *bà ǹ-bà-lá* 'these, not those', *tì ǹ-tì-lá* 'these, not those', *ŋà ǹ-ŋà-lá* 'these, not those', etc.

香港大學圖書館 HKU Libraries

A final note about elements that mark contrast is that the demonstrative *lá* can be dropped. In such instances, the high tone of the pronoun does not change.

(150) a. ***Ǹ-bá-****(lá)* *kā=rú.*
CONTR-CL.2-DIST not.located=there
'THOSE (people) are not around.'

b. ***Ǹ-wá-****(lá)* *kā=rú.*
CONTR-CL.1-DIST not.located=there
'THAT (person) is not available.'

c. ***Ǹ-kú-****(lá)* *yāā* *bāāsā.*
CONTR-CL.2-DIST now be.tender
'THAT (piece of guinea-fowl meat) is now tender.'

d. ***Ǹ-ŋá-****(lá)* *yāā* *bāāsā.*
CONTR-CL.2-DIST now be.tender
'THOSE (pieces of guinea-fowl meat) are now tender.'

香港大學圖書館 HKU Libraries

3.12 **Reflexive marker *dék***

To express reflexive relations, pronominal prefixes are attached to the invariable stem *dék* 'self' to derive the reflexive pronouns (listed in Table 17). Reflexive pronouns are used in the object slot so that the action or activity denoted by the verb is seen as being carried out on or deflected back to the performer. The reflexive marker *dék* has emphatic or intensification uses.

Table 17: Reflexive pronouns

Class	**Reflexive**	**Gloss**
1	*wà-dék*	him/herself
2	*bà-dék*	themselves
3	*dì-dék*	itself
4	*ŋà-dék*	themselves (non-human)
5	*kà-dék*	itself
6	*sì-dék*	themselves (non-human)
7	*kù-dék*	itself
8	*tì-dék*	themselves (non-human)
9	*bù-dék*	itself

香港大學圖書館 HKU Libraries

The following are examples of reflexive constructions:

(151) a. ***Àpók*** *sùùrì* ***wà-dék***.
NAME wash.PFV CL.1-self
'Apok washed herself.'

b. ***Nípō-(ba)-má*** *ŋmà* ***bà-dék***.
woman-2-DEF.2 blame.PFV CL.1-self
'The women blamed themselves.'

c. ***Bīāk*** *dòm* ***kà-dék***.
dog.5 bite.PFV CL.5-self
'A dog bit itself.'

d. ***Nùìn-sà-ŋá*** *lìg* ***sì-dék*** *bò*
bird-6-DEF.4 close.PFV CL.6-self be.located
kpànjɔ̀k-kú *pō.*
basket.7-DEF.7 in
'The birds trapped themselves in the basket.'

e. ***Nì*** *gānī* ***nì-dék***.
2PL protect.IMP 2PL-self
'Protect yourselves.'

香港大學圖書館 HKU Libraries

Besides its reflexive uses, *dék* has emphatic uses. In this usage, *dék* functions as an adnominal in a subject or an object slot to emphasise a noun or pronoun. *Dék* can be repeated (152).

(152) a. *Àtúgá* ***dék*** *wén-ní* *zèrì* *kpīāk-ká*
NAME EMPH god.3-DEF.3 reject.PFV fowl.5-DEF.5
'Atuga's own god rejected the fowl.'

b. *Àzúmà* *jàm* *tā* *wà* ***dék*** *bònīŋ.*
NAME DIST.PST have CL.1 EMPH donkey.5
'Azuma had his own/personal donkey.'

c. *Tɔ̀m* *bù-lá* ***dék*** ***dék*** *lī* *kààsì*
battle.9 CL.9-DIST EMPH EMPH FOC destroy.PFV
dàgbàn-(ba)-má *tɛ̄ŋ-ká.*
NAME-2-DEF.2 community.5-DEF.5
'That very battle destroyed the Dagbon community.'

The use of the same element to express both emphasis/intensification and reflexive relations is a widespread phenomenon in African languages (see Konig & Siemund 2000; Heine 2000). Largely unexplored in Gur/Mabia languages, this phenomenon appears to be prevalent among the neighbours of Buli (e.g. Dagaare, Dagbani, and Likpakpanl). Detailed investigations into this could be useful for cross-linguistic and typological studies.

香港大學圖書館 HKU Libraries

3.13 **Reciprocal marker *chāāb***

Reciprocal relations are expressed with the plural morpheme *chāāb*[17] *(sg. chɔ̄* 'each other/one another'. The final element *-b* in *chāāb* is a remnant of the human *-ba*, but it is invariably employed in reference to human and non-human entities. Cognates of *chāāb* for expressing reciprocal relations in other Gur/Mabia *táá*, *tàbá*, *tààbà*, and *táábá* (see Bodomo 1997 for Dagaare; Olawsky 1999 for Dagbani; Abubakari 2018 for Kusaal).

To express a reciproical relation or situation, c*hāāb* occupies the object slot to establish a co-referential relation with the subject, which could be a noun of any class. The action denoted by the verb is interpreted as being undertaken by individuals who act in the same manner towards each other or one another.

(153) a. ***Nípō-(ba)-má*** *màà* ***chāāb***.
woman-2-DEF.2 help.PFV one.another
'The women helped one another.'

b. ***Bà*** *fɔ̀b* ***chāāb*** *dùènì* *tɛ̄ŋ.*
CL.2 strike.PFV one.another put.down.PFV ground.5
'They (warband) struck one another to the ground.'

[17] *chāāb* translates roughly into English as 'fellows', 'mates', 'peers' or 'type/kind'. Similar elements for expressing reciprocal relations are quite widespread in African languages (see Konig & Siemund 2000; Heine 2000). *chāābā* is rarely used presently, but its definite form *chāā(b)-má* (sg. *chɔ̄ā-wá*) is still used in everyday conversations.

c. ***Dàchāā-sā-ŋá*** *pùùsì* ***chāāb.***
rival-6-DEF.4 greet.PFV each.other
'The rivals greeted each other.'

d. ***Bìmbìlì-sà-ŋá*** *pòm* ***chāāb.***
cooking.pot-6-DEF.4 hit.PFV each.other
'The cooking pots hit each other.'

Depending on the semantic class of the verb, other relations or situations e.g. 'sociative' and 'chaining' (see Lichtenberk 2000) may also be expressed by *chāāb.* Examples (154)a. and (154)b., respectively, express sociative and chaining relations. In the following examples, *chāāb* (sg. *chɔ̄ā*) does not express reciprocal relation or situation.

(154) a. *Bùlìsà* *mièná* *gùm* *chāāb.*
NAME.6 all join.PFV one.another
'All Bulisa (people) came together.'

b. *Bònìŋ-sà-ŋá* *và* *chāāb.*
donkey-6-DEF.4 follow.PFV one.another
'The donkeys followed one another.'

香港大學圖書館 HKU Libraries

In contexts like (155), *chāāb* (sg. *chɔ̄ā*) does not express reciprocal relations. Instead, it functions as a full modified or modifying noun.

(155) a. *Fì* ***chɔ̄ā*** *kā* *dé.*
1SG mate.1 not.located here
'Your mate is not here.'

b. *Fì* ***chāā-(ba)-má*** *kā* *dé.*
1SG mate.2-DEF.2 not.located here
'Your mates are not here.'

c. *Dāā* *bí-sá* ***chāāb*** *lī* *kò-bà.*
NEG.FOC child-6 mate.2 FOC father-2
'Children are not mates (co-equals) of fathers.'

d. *Nùèn-sà-ŋá* ***chāāb*** *ǹnā.*
slipper-6-DEF.4 type.2 PROX.PRSTV
'Here are similar kinds of the slippers.'

e. *Kù* ***chɔ̄ā*** *bò* *dɔ̀k*
CL.7 kind.1 be.located room.7
'Its kind is in the room.'

香港大學圖書館 HKU Libraries

3.14 **Presentative demonstrative *ǹnā***

Ǹnā draws the attention of an addressee to an entity or a situation. If the entity is materially present, the speaker asks that the addressee see it. As (156) illustrates, *ǹnā* can function as a predicate of presentational clauses.

(156) *Mí* *péém-á-ŋá* ***ǹnā.***
1SG arrow-4-DEF.4 PROX.PRSTV
'Here are my arrows.'

In Chuchuliga-Buli, *dé* is uncommon; *ǹnā* covers the function of *dé* in Sandema-Buli performs.

Ǹnā is often used in complex constructions where a presentational construction that draws the addressee's attention to an entity or a situation is followed by a clause that gives further information (157).

(157) *Bíík-ká* ***ǹnā.***
child.5-DEF.5 PROX.PRSTV
'Here is the child.'

Finally, *ǹnā* orients an addressee to the information in the following discourse. In this case, *ǹnā* is typically followed by an ideophone (158)a. or a non-verbal demonstration (158)b.

香港大學圖書館 HKU Libraries

(158) a. *(…)* *tì* *Bábátù* *nyɛ̀* *tɛ̄ŋ-sā-ŋá* ***ǹnā̄***
CONN NAME do.PFV town-6-DEF.4 PROX.PRSTV
sááá
IDEO:empty

'… and Babatu deserted the towns, this way… emptily.'

b. *Àdánlié-wá* *à* *gɔ̄g* *ká* ***ǹnā̄*** *[…]*[18]
NAME.1-DEF.1 IPFV dance FOC PROX.PRSTV […]

'The Adanlie dances this way […].'

3.15 Deictic demonstratives *lé* and *lá*

Deictic demonstratives are formed by attaching pronominal prefixes to the stems *lé* or *lá. The* derived elements fall into groups: *proximal demonstratives* which refer to items or entities close to the speaker, and *distal demonstratives* which refer to items or entities distant from the speaker. Table 18 presents the demonstratives, with X representing an unnamed entity. Some speakers use the deictic adverb *dé* interchangeably with *lé* in this context (e.g. *wálé ~ wádé* 'this X', *bálé ~ bádé* 'these X' , *ŋálé ~ ŋádé* 'these X', *kúlé ~ kúdé* 'this X').

[18] The speaker throws her hands into space and stomps her feet on the ground continuously in a rapid manner, demonstrating how an Adanlie dances.

Table 18: Proximal and distal demonstratives

Class	Proximal	Distal
1	*wálé* 'this X'	*wálá* 'that X'
2	*bálé* 'these X'	*bálá* 'those X'
3	*dílé* 'this X'	*dílá* 'that X'
4	*ŋálé* 'these X'	*ŋálá* 'those X'
5	*kálé* 'this X'	*kálá* 'that X'
6	*sílé* 'these X'	*sílá* 'those X'
7	*kúlé* 'this X'	*kúlá* 'that X'
8	*tílé* 'these X'	*tílá* 'those X'
9	*búlé* 'this X'	*búlá* 'that X'

The following sentences illustrate the use of the demonstratives:

(159) a. *Kìn-jɔ̄ɔ̄jì* *lī* *pà* ***kú-lé*** *tɛ̀* *mú.*
NAME FOC take.PFV CL.7-PROX give.PFV 1SG.OBJ

'King George gave this (medal) to me.'

b. ***Ŋá-lé*** *àn* *nālā.*
CL.4-PROX NEG be.beautiful

'These (footwear) are not beautiful.'

c. *Kán* *nyù* ***bú-lá.***
NEG.IMP drink CL.9-DIST

'Do not drink that (alcohol).'

d. *Pā* ***dí-lá.***
take.IMP CL.3-DIST

'Take that (seed).

香港大學圖書館 HKU Libraries

Aside from referring to concrete entities away from the speaker, *dílá* is sometimes employed when referring to concepts, ideas, qualities, or states (160). In (160), *dílá* serves a discourse-coherence function by making anaphoric reference to information given in a preceding discourse.

(160) a. ***Dí-lá*** *lī* *tì* *mìèná* *nyɛ̀.*
CL.3-DIST FOC 1PL all do.PFV
'That is what we all did.'

b. *Àchám* *àn* *sìàgí* *yà.* ***Dí-lá*** *nyīŋ*
NAME NEG.PFV agree PRF CL.3-DIST reason.5
tì *Bábátù* *sààlò.*
CONN NAME fall.PFV
'Acham did not agree. That is why Babatu fell.'

To explicitly specify entities being referred to, nouns can be introduced before the demonstratives (161).

香港大學圖書館 HKU Libraries

(161) **Noun and Demonstrative**

a.	*bèn*	*dí-lé*	*bèn*	*dí-lá*
	year.3	CL.3-PROX	year.3	CL.3-DIST
	‘this year’		‘that year’	
b.	*bèn-(a)*	*ŋá-lé*	*bèn-(a)*	*ŋá-lá*
	year-4	CL.4-PROX	year(4)	CL.4-DIST
	‘these years’		‘those years’	
c.	*nú(ri)*	*wá-lé*	*nú(ri)*	*wá-lá*
	person.1	CL.1-PROX	person.1	CL.1-DIST
	‘this person’		‘that person’	
d.	*nú-(ba)*	*bá-lé*	*nú-(ba)*	*bá-lá*
	person-2	CL.1-PROX	person-2	CL.1-DIST
	‘these persons’		‘those persons’	
e.	*tìì-(m)*	*bú-lé*	*tìì-(m)*	*bú-lá*
	medicine-9	CL.9-PROX	medicine-9	CL.9-DIST
	‘this medicine’		‘that medicine’	
f.	*tìì-(ta)*	*tí-lé*	*tìì-(ta)*	*tí-lá*
	medicine-8	CL.9-PROX	medicine-8	CL.9-DIST
	‘these medicines’		‘those medicines’	

香港大學圖書館 HKU Libraries

g. *gbáŋ* *ká-lé* *gbáŋ* *ká-lá*
book.5 CL.5-PROX book.5 CL.5-DIST
'this book' 'that book'

h. *gbáŋ-(sa)* *sí-lé* *gbáŋ-(sa)* *sí-lá*
book-6 CL.6-PROX book-6 CL.6-DIST
'these book' 'those books'

i. *kpɔ́ŋ* *kú-lé* *kpɔ́ŋ* *kú-lá*
guinea.fowl.7 CL.7-PROX guinea.fowl.7 CL.7-DIST
'this guinea fowl' 'that guinea fowl'

j. *kpííná* *ŋá-lé* *kpííná* *ŋá-lá*
guinea.fowl.4 CL.4-PROX guinea.fowl.4 CL.4- DIST
'these guinea fowls' 'those guinea fowls'

These demonstrative constructions can alternatively be expressed using a structure consisting of a noun, a definiteness marker, and a demonstrative, as shown in (162). However, in this context, the structure containing the distal demonstrative carries a presentative meaning along with its basic entity-pointing function.

香港大學圖書館 HKU Libraries

(162) Noun, Definiteness marker, and Demonstrative

a.	*bèn-ní* *dé* year.3-DEF.3 PROX 'this year'	*bèn-ní* *lī* *lá* year.3-DEF.3 FOC DIST 'that year/that is the year'
b.	*bèn-à-ŋá* *dé* year-4-DEF.4 PROX 'these years'	*bèn-à-ŋá* *lī* *lá* year-4-DEF.4 FOC DIST 'those years/those are the years
c.	*nú(ri)-wá* *dé* person.1-DEF.1 PROX 'this person'	*nú(ri)-wá* *lī* *lá* person.1-DEF.1 FOC DIST 'that person/that is the person'
d.	*nú-(ba)-má* *dé* person-(2)-DEF.2 PROX 'these persons'	*nú-(ba)-má* *lī* *lá* person-2-DEF.2. FOC DIST 'those persons/those are the persons'
e.	*tìì-(m)-mú* *dé* medicine-9-DEF.9 PROX 'this medicine'	*tìì-(m)-mú* *lī* *lá* medicine-9-DEF.9 FOC DIST 'that medicine/that is the medicine'
f.	*tìì-tà-ŋá* *dé* medicine-8-DEF.4 PROX 'these medicines'	*tìì-tà-ŋá* *lī* *lá* medicine-8-DEF.4 FOC DIST 'those medicines/those are the medicines'

香港大學圖書館 HKU Libraries

g.	*gbáŋ-ká*	*dé*		*gbáŋ-ká*	*lī*	*lá*
	book.5-DEF.5	PROX		book.5-DEF.5	FOC	DIST
	'this book'			'that book/that is the book'		
h.	*gbáŋ-sá-ŋá*	*dé*		*gbáŋ-sá-ŋá*	*lī*	*lá*
	book-6-DEF.4	PROX		book-6-DEF.4	FOC	DIST
	'these book'			'those books/those are the books'		
i.	*kpɔ́ŋ-kú*	*dé*		*kpɔ́ŋ-ku*	*lī*	*lá*
	guinea.fowl.7-DEF.7	PROX		guinea.fowl(7)-DEF.7	FOC	DIST
	'this guinea fowl'			'that guinea fowl/that is the guinea fowl'		
j.	*kpííná-ŋá*	*dé*		*kpííná-ŋá*	*lī*	*lá*
	guinea.fowl(4)-DEF.4	PROX		guinea.fowl.4-DEF.4	FOC	DIST
	'these guinea fowls'			'those guinea fowls/those are the guinea fowls'		

In present-day usage, the proximal demonstrative constructions in (162) continue to be used for referring to entities that are near the speaker (just as those in (161)); they all focus on the nearness or closeness of entities. To shift focus to identifying or presenting entities to an addressee rather than their proximity, the *ǹnā*-presentative construction discussed in section 3.14 is employed. (e.g. *nú(rí)-wá ǹnā* 'here/this is the person', *tììtàŋá ǹnā* 'here/these are the medicines)[19]. In contrast, the distal demonstrative constructions in (162) are employed as full assertions to identify or present entities to addressees rather than indicate the nearness or farness of entities. As can be seen in (162) the focus marker, *lī*, is introduced between the definite noun and the distal demonstrative (e.g. *nú(ri)wá lī lá* 'that is the person', *tììtàŋá lī lá* 'those are the medicines', etc.).

[19] In Chuchuliga-Buli, this distinction is not seen, as the presentational construction is invariably employed (e.g. *Nu(ri)wa nna* 'This is the man.' / 'this man' / 'Here is the man.')

Dé and *dú* are commonly used as adverbs for indicating a location relative to the speaker's position. *Dé* indicates a location that is close to the speaker (163)a., whereas *dú* indicates a location away from the speaker (163)b.

(163) a. *Bà* *bò* ***dé***.
CL.2 be.located here
'They are here.'

b. *Bà* *bò* ***dú***.
CL.2 be.located there
'They are here.'

When they function as adverbs, *dé* and *dú* are sometimes used together with *ǹnā* and *lá* (164). However, in the subject position, *dú* is always accompanied by *lá*.

(164) a. *Bà* *bò* ***dé*** ***ǹnā***.
CL.2 be.located here PROX.PRSTV
'They are here.'

b. ***Dé*** ***ǹnā*** *lī* *bà* *kò* *Àchám.*
here PROX.PRSTV CONN CL.2 murder.PFV NAME
'Here is (the location) where Acham was murdered.'

c. *Bà* *bò* ***dú*** ***lá***.
CL.2 be.located there DIST
'They are there.'

d. ***Dú*** ***lá*** *lī* *bà* *kò* *Àchám.*
there DIST FOC CL.2 murder.PFV NAME
'There is (the location) where Acham was murdered.'

香港大學圖書館 HKU Libraries

Finally, *lá* functions as a clausal demonstrative by pointing to an activity or event mentioned earlier in a discourse. This usage is commonly seen in narratives, where the event or activity pointed at establishes a temporal frame for a main event to follow. In example (165), ***lá*** points to the events expressed by the constructions preceding it. These events establish the temporal contexts for the main events expressed by the constructions following *lá.*

(165) a.

Kù	*lī*	*vààsì*	***lá,***	*fì*	*à*	*pōlīŋ*
CL.7	SUB	boil.PFV	CDM	2SG	IPFV	whisk

ká=mā
FOC=PRED.EMPH

'As it's (millet gruel) boiled, you whisk it.'

b.

Bà	*lī*	*kò*	*Àchám*	***lá,***	*Bùlìsà*	*námbí-é*
CL.2	SUB	murder.PFV	NAME	CDM	NAME	eye-4

mùnì	*yòò.*
become.red	INTJ

'When they murdered Acham, Bulisa became very angry.'

香港大學圖書館 HKU Libraries

3.16 Demonstrative adverbs *dé* and *dú*

Dé and *dú* function as demonstrative adverbs by identifying or pointing to a deictic centre. *Dé* identifies a deictic centre near the speaker, while *dú* identifies a deictic centre away from the speaker.

(166) a. ***Dé*** *lī* *bà* *gèb* *tɔ̄m-mú*
here FOC CL.2 crossed.PFV warbad.9-DEF.9
'Here is where they crossed the warband.'

b. *Tì* *pàà* ***dú*** *ká* *yɔ̄k.*
1PL reach.PFV there FOC night.7
'We got there at NIGHT.'

Dú is gradually losing its morphological independence and is being replaced by the allomorphic variants *=rú and =ró*.

(167) a. *Nààwén* *bò* *dú.* [...bò=rú/ró]
god be.located there
'God is around.' (lit.: God is there)

b. *Àkúrúgú* *kā* *dú.* [...kā=rú]
NAME not.located there
'Akurugu is not around.'

香港大學圖書館 HKU Libraries

3.17 Interrogative markers

3.17.1 *nà*

Interrogative pronouns are formed by attaching pronominal prefixes to the stem *nà,* as Table 19 shows.

Table 19: Interrogative pronouns

Class	Interrogative pronouns	Gloss
1	*wànà*	who [person]
2	*bànà*	who [persons]
3	*dìnà*	which one
4	*ŋànà*	which of them
5	*kànà*	which one
6	*sìnà*	which of them
7	*kùnà*	which one
8	*tìnà*	which of them
9	*bùnà*	which one

As illustrated in (168), interrogative pronouns ask questions about entities.

(168) a. ***Wà-nà*** *lī* *Sándém* *nààb?*
CL.1-INTERR FOC PLACE chief.1
'Who is chief of Sandema?'

b. ***Sì-nà*** *lī* *wà* *tā* *chɛ̀ŋ?*
CL.6-INTERR FOC CL.1 take go
'Which [cattle] did he take away.'

Referents can be specified, as seen in (169) and (170). The pronomial prefix, in this case, is selected according to the semantic content of the noun.

香港大學圖書館 HKU Libraries

(169) a. ***Yé-(ri)*** ***dì-nà*** *lī* *wà* *jù?*
house-3 CL.3-INTERR FOC CL.1 burn.PFV
'Which house did he burn?'

b. ***Yé-(é)*** ***ŋà-nà*** *lī* *wà* *jù?*
house-4 CL.4-INTERR FOC CL.1 burn.PFV
'Which houses did he burn?'

(170) a. ***Zíí-(m)*** ***bù-nà*** *lī* *tàlì* *yá?*
blood-9 CL.9-INTERR FOC remain PRF
'Which blood is left?'

b. ***Zíí-(m)*** ***tì-nà*** *lī* *tàlì* *yá?*
blood-9 CL.8-INTERR FOC remain PRF
'Which (bottles of) blood are left?'

To inquire about number of entities, *dìnà* is used, with pronominal prefixes optionally introduced before it. Compare the use of *dìnà* (together with pronominal prefixes) the sentences in (171).

(171) a. *Nídɔ̄-bá* ***(bà-)*** ***dì-nà*** *lī* *kpàlìm* *yá?*
man-2 CL.2 CL.3-INTERR FOC fight.PFV PRF
'How many men fought?'

b. *Tìì-tà* ***(tì-)*** ***dì-nà*** *lī* *nì* *nyù.*
medicine-8 CL.8 CL.3-INTERR FOC 2PL drink.PFV
'How many medicines did you drink?'

香港大學圖書館 HKU Libraries

3.17.2 *bɔ̀à 'what'*

Bɔ̀à 'what' inquires about specific entities, as illustrated with the question-and-answer constructions in (172) and (173).

(172) A: *Bábátù* *pà=á* ***bɔ̀à*** *á* *kpālīm?*
NAME use.PFV=FOC what IPFV fight
'What did Babatu use for fighting?'

B: *Bábátù* *pà=á* ***kàmbòŋ-dùɔ̀k*** *á* *kpālīm?*
NAME use.PFV=FOC stranger.5-stick.7 IPFV fight
'Babatu fought using a rifle.'

(173) A: ***Bɔ̀à*** *li* *tì* *nyɛ̀* *kààsì?*
what FOC 1PL do.PFV spoil
'What did we do wrong?'

B: *Tàmá* *àn* *nyɛ̄* ***jāāb*** ***jāāb****?*
1PL.INCL NEG.PFV do thing.9 thing.9
'We did absolutely nothing wrong.'

Sometimes the referenced entity is specified, as in (174). If unknown or unspecified, the entity is replaced with the generic noun *jāāb* (pl. *ŋāntā*).

香港大學圖書館 HKU Libraries

(174) a. *Nì* *pà=á* ***bɔ̀à*** ***tìim*** *sò?*
2PL take.PFV=FOC what medicine.9 bathe
'What medicine did you use to bathe?'

b. *Nì* *pà=á* ***bɔ̀à*** ***jāāb*** *sò?*
2PL take.PFV=FOC what thing.9 bathe
'What thing (concoction) did you bathe with?'

To inquire about the reason or cause of an action, *bɔ̀à* is used together with the noun *nyīŋ*[20] 'reason' (175)a. Alternatively, the expression *bɔ̀à lī sɔ̄ā* 'owing to what' can be employed, as illustrated in (175)b.

(175) a. *Tì* *à* *nyɛ̄* *dí-lá* *ká* ***bɔ̀à*** ***nyīŋ?***
1PL IPFV do CL.3-DIST FOC what reason.5
'For what reason do we do this?'

b. ***Bɔ̀à*** ***lī*** ***sɔ̄ā*** *tì* *wà* *nàmsì* *nídɔ̄-bā* *nyīnīī*
what FOC own CONN CL.1 maltreat.PFV man-2 only
'Why did he maltreat only men?'

[20] Body part *nyīŋ*'skin/body'

3.17.3 *sɛ̀* ‘how’

Sɛ̀ inquires about a response or reaction to an event or state. Consider the use of *sɛ̀* in the question in (176), which inquires about the reaction of little children while their mothers were being separated from them and taken away.

(176) A: … *àtì* *bí-(sa)-lɔ̀ɔ̀-tá-ŋá* *nyɛ̀* *sɛ̀?*
CONN child-(6)-little-8-DEF.4 do.PFV how
‘… and how did the children react?’

B: *Bà* *kàsìm* *á* *kāārī* *ká=mā*
CL.2 continuously IPFV scream FOC=PRED.EMPH
‘They were screaming continuously.’

3.17.4 *bɛ̄* ‘where’ and *lè* ‘be where’

Bɛ̄ ‘where’ is employed for inquiring about a location or part of an entity, as illustrated in (177).

(177) a. *Bà* *bò=ó* *bɛ̄.*
CL.2 be.located=FOC where*?*
‘Where are they?’

b. *Chùmbèn-ní* *bɛ̄* *lī* *kàbì.*
corn.3-DEF.3 where FOC be.burnt
‘Which part of the corn is burnt?’

香港大學圖書館 HKU Libraries

Lè is used in a face-to-face situation to inquire about the physical location of an entity, including persons. Example (179) contradicts Schwarz's (2005: 95) suggestion that *lè* is used to inquire about the location of only non-human and inanimate entities.

(178) A: *Tɔ̄mpén-ní* *lè.*
arrow.3-DEF.3 be.where
'Where is the arrow.'

B: *Dì* *bò* *lɔ́k-kú* *pō.*
CL.3 be.located quiver.7-DEF.7 in
'It is in the quiver.'

(179) A: *Àdém* *lè?*
NAME be.where
'Where is Adem?'

B: *Wà* *kàlì* *gbɔ̀ŋ-kú* *zúk.*
CL.1 be.seated rooftop.7-DEF.7 top.7
'He is seated on the roof top.'

香港大學圖書館 HKU Libraries

Aside from the use of *lè* to inquire about the physical location of a person, *lè* is also used as a conversational filler or a device to get the attention of a listener. In this usage, *lè* can serve as a rhetorical device for initiating a conversation or directing a listener's attention to subsequent information (180).

(180) a. *Ànàbìɔ̀k* *lè?*
NAME be.where
'Anabiok, do I have your attention?'

b. *Fì* *lè*?
2SG be.where
'You, do I have your attention?'

3.17.5 *dìnpō* and *dìsàpō* 'when'

Dìnpō and *dìsàpō*[21] 'when' are used to inquire about the time an event took place. These two elements can be used interchangeably with no meaning differences (181).

(181) a. *Fí* *dē* *nāām-mú* *ká* *dìnpō*.
2SG reign.PFV chieftaincy.9-DEF.9 FOC when
'When did you become a chief?'

b. *Bà* *bìàgì* *fí* *ká* *dìsàpō*
CL.2 born.PFV 2SG FOC when
'When were you born?'

[21] *Dìnpō* 'when' is a lexicalised expression comprising the pronoun *dìnà* and *pō* 'in'. The back vowel has fallen out of use.

4 Other word classes

4.1 Quantifiers

Quantifiers constitute a heterogeneous group of morphological elements that express number, degree, or extent. This section discusses numerals (§4.1.1) and non-numerals (§4.1.2).

4.1.1 Numerals

The numerals ‘one’ ‘to ‘seven’ are infected with various class prefixes, according to the class of the noun which is modified; numerals beyond ‘seven’’ are not inflected. However, there are several irregularities as the prefix *sì-* usually inflects numerals that modify plural human and non-human nouns.

4.1.1.1 Numerals 1 to 10

Table 20 lists the first ten numerals, ‘one’ to ‘ten’.

香港大學圖書館 HKU Libraries

Table 20: Numerals 1 to 10

Singular (inflected with prefixes)

Stem	**1/wà**	**3/dì**	**5/kà**	**7/kù**	**9/bù**	**Gloss**
nyī	*wànyī*	*dìnyī*	*kànyī*	*kùnyī*	*bùnyī*	'one'

Plural (inflected with prefixes)

Stem	**2/bà**	**4/ŋà**	**6/sì**	**8/tì**		
-yè	*bàyè*	*ŋàyè*	*sìyè*	*tìyè*		'two'
-tà	*bàtà*	*ŋàtà*	*sìtà*	*tìtà*		'three'
-nàànsì	*bànàànsì*	*ŋànàànsì*	*sìnàànsì*	*tìnàànsì*		'four'
-nù	*bànù*	*ŋànù*	*sìnù*	*tìnù*		'five'
-yùèbì	*bàyùèbì*	*ŋàyùèbì*	*sìyùèbì*	*tìyùèbì*		'six'
-yùèpɔ̄ī	*bàyùèpɔ̄ī*	*ŋàyùèpɔ̄ī*	*sìyùèpɔ̄ī*	*tìyùèpɔ̄ī*		'seven'

Plural (uninflected)

nāānīŋ	*nāānīŋ*	*nāānīŋ*	*nāānīŋ*	*nāānīŋ*	*nāānīŋ*	'eight'
nèūk	*nèūk*	*nèūk*	*nèūk*	*nèūk*	*nèūk*	'nine'
pī	*pī*	*pī*	*pī*	*pī*	*pī*	'ten'

4.1.1.2 Forming numerals 11 to 19

To form the numerals 'eleven' to 'nineteen', 10 is used as a base, followed by an addend within the range of 'one' to 'nine'. The addend is joined to the base (*pī* 'ten') by means of the coordinator *lì*. This creates additive expressions like '10 and 1' (for 11), '10 and 5' (for 15), etc.

香港大學圖書館 HKU Libraries

Table 21: Numerals 11 to 19

	Numeral	Example (Human noun)	‘Gloss
11	*pī lì -nyī*	*núbá pī lì wànyī* (CL. 2/1)	‘eleven persons’
12	*pī lì -yè*	*núbá pī lì bàyè* (CL. 2/2)	‘twelve persons’
13	*pī lì -tà*	*núbá pī lì bàtà* (CL. 2/2)	‘thirteen persons’
14	*pī lì -nàànsì*	*núbá pī lì bànàànsì* (CL. 2/2)	‘fourteen persons’
15	*pī lì -nù*	*núbá pī lì bànù* (CL. 2/2)	‘fifteen persons’
16	*pī lì -yùèbì*	*núbá pī lì bàyùèbì* (CL. 2/2)	‘sixteen’ persons’
17	*pī lì -yùèpɔ̄ī*	*núbá pī lì bàyùèpɔ̄ī* (CL. 2/2)	‘seventeen persons’
18	*pī lì nāānīŋ*	*núbá pī lì nāānīŋ* (CL. 2/-)	‘eighteen persons’
19	*pī lì nèūk*	*núbá pī lì nèūk* (CL. 2/-)	‘nineteen persons’

The following illustrate the use of numerals 11 to 19 for non-human nouns.

(182) **Example** **Gloss**

tānā pī lì dìnyī (CL. 4/3) ‘eleven stones’

tānā pī lì ŋàyè (CL. 4/4) ‘twelve stones’

fíŋsá pī lì sìtà (CL. 6/6) ‘thirteen canes

kɔ̀ktà pī lì tìnàànsì (CL. 8/8) ‘thirteen ghosts’

dáátá pī lì tìnù (CL. 8/8) ‘eleven (bottles of) alcohol

váátá pī lì tìyùèbì (CL. 8/7) ‘eleven leaves’

kōlūtā pī lì tìnù (CL. 8/8) ‘fifteen scrotums’

ŋáŋsá pī lì nāānīŋ (CL. 6/-) ‘eighteen legs’

gúŋtá pī lì nèūk (CL.8/-) ‘nineteen mushrooms’

香港大學圖書館 HKU Libraries

4.1.1.3 Forming numerals 20 to 99

The numerals 20 to 99 are formed by specifying the number of 10s. To achieve this, a number between 1 and 10 is introduced after *pī* 'ten' to indicate the multiples of 10 being referred to, followed by the digital *sì*, before an addend is linked by *lì*. The prefix of an addend has to agree with the noun. (e.g. *núbá pī sìyè* 'twenty people', *bènà pī sìtà* 'twenty years', *níígá pī sìnàànsì* 'forty cattle' etc.).

Table 22: Numerals 20 to 99 (multiples of 10)

	Numeral	Example	Gloss
20	*pī sìyè* (10 x 2)	*gbáŋsá pī sìyè* (CL. 6)	'twenty books'
30	*pī sìtà* (10 x 3)	*kpíŋsá pī sìtà* (CL. 6)	'thirty orphans'
40	*pī sìnàànsì* (10 x 4)	*pāāŋsā pī sìnàànsì* (CL. 6)	'forty crickets'
50	*pī sìnù* (10 x 5)	*núbá pī sìnù* (CL. 2)	'fifty persons
60	*pī sìyùèbì* (10 x 6)	*síé pī sìyùèbì* (CL. 8)	'sixty bees
70	*pī sìyùèpɔ̄ī* (10 x 7)	*gúŋtá pī sìyùèpɔ̄ī* (CL. 8)	'seventy mushrooms'
80	*pī nāānīŋ* (10 x 8)	*bíé pī nāānīŋ* (CL.3)	'eighty seeds'
90	*pī nèūk* (10 x 9)	*fáátá pī nèūk* (CL.8)	'ninety baboons'

The following are examples of the use of numerals 21 to 99 for non-human nouns.

(183)

Example	**Gloss**
nyáátá pī sìyè lì bù-nyī	'twenty-one (pots of) water'
péémá pī sìtà lì ŋàyè	'thirty-two nails'
félísá pī sìnàànsì lì sìtà	'forty-three white persons'
chíísá pī sìnù lì sìnàànsì	'fifty-four months'
wɔ̄gtā pī sìyùèbì lì tìnù	'sixty-five pieces of sabdariffas'
bònìŋsá pī sìyùèpɔ̄ī lì sìyùèbì	'seventy-six donkeys'
yéé pī nāānīŋ lì ŋàyùèpɔ̄ī	'eighty-seven houses'
núbá pī nèūk lì nāānīŋ	'ninety-eight persons'
kùŋtà pī nèūk lì nèūk	'ninety-nine antelopes'

香港大學圖書館 HKU Libraries

4.1.1.4 Forming numerals 100 to 1000

The word for 'hundred' is *kɔ̀ɔ̀k* (CL.5), and its plural form is *kɔ̀bsà* 'hundreds'. This suggests that *kɔ̀b* is the original stem of *kɔ̀ɔ̀k*, with the segment *-b* falling out when followed by *-k*, triggering compensatory lengthening.

As seen in Table 23, numbers from 101 and 999 are formed by using 100 as a base and, then, specifying the number of 100s.). Any 'ten' and/or 'one' digits following are derived by means of the processes described in the previous sections (4.1.1.1- 4.1.1.3). This formula is applicable up to 1000 (*kɔ̀bsà pī* 'ten 100s'), and numerals beyond 1000 can be systematically formulated following the same pattern.

Table 23: Numerals 100 to 1000

	Numeral	Translation
100	*kɔ̀ɔ̀k*	one 100
123	*kɔ̀ɔ̀k lì pī sìyè lì -tà*	one 100, two 10s, and 3
211	*kɔ̀bsà sìyè lì pī lì -nyī*	two 100s, 10, and 1
334	*kɔ̀bsà sìtà lì pī sìtà lì -nàànsì*	three 100s, three 10s, and 4
445	*kɔ̀bsà sìnàànsì lì pī sìnàànsì lì -nù*	four 100s, four 10s, and 5
567	*kɔ̀bsà sìnù lì pī sìyùèbì lì -yùèpɔ̄ī*	five 100s, six 10s, and 7
600	*kɔ̀bsà sìyùèbì*	six 100s
782	*kɔ̀bsà sìyùèpɔ̄ī lì pī nāānīŋ -yè*	seven 100s, eight 10s, and 2
889	*kɔ̀bsà nāānīŋ lì pī nāānīŋ lì nèūk*	eight 100s, eight 10s, and 9
989	*kɔ̀bsà nèūk lì pī nāānīŋ lì nèūk*	nine 100s, eight 10s, and 9
1000	*kɔ̀bsà pī*	ten 100s

香港大學圖書館 HKU Libraries

4.1.1.5 Enumeration (non-referential) numerals

In counting, the prefix *ǹ-* is added only to agreeing numbers (1–7). The first ten numerals in counting are provided in Table 24.

Table 24: Enumeration numerals

	Numeral	Gloss
1	*ǹ-nyī*	'one'
2	*ǹ-yè*	'two'
3	*ǹ-tà*	'three'
4	*ǹ-nàànsì*	'four'
5	*ǹ-nù*	'five'
6	*ǹ-yùèbì*	'six'
7	*ǹ-yùèpɔ̄ī*	'seven'
8	*(ǹ-)nāānīŋ*	'eight'
9	*nèūk*	'nine'
10	*pī*	'ten'

4.1.1.6 Numerals in quantification function

Typically, numerals are used as adnominal modifiers to indicate the 'number' of both concrete or abstract entities. A numeral agrees with the noun that it modifies. Example (184) illustrates the modifying use of some numerals.

(184)

Tì	*lī*	*á*	*bīīsī*	*ǹnā,*	***nú-bá***	***bà-yè***
1PL	SUB	IPFV	speak	PROX.PRSTV	person-2	CL.2-two
lī	*bà*	*nyìŋ-tùìlīm-mú*			*pāgrā,*	
FOC	CL.2	body-hotness.9-DEF.9			be.critical	
nú-bá		***pī***	*lī*	*jɔ̀g*	*bà*	*nyù-vùùrīm.*
person-2		ten	FOC	lose.PFV	CL.2	nose.3-breath.9

'As we speak, two people are in critical condition, (and) ten people have lost their lives.'

香港大學圖書館 HKU Libraries

Temporal nouns can be modified with numerals to indicate number of time units (185).

(185) *Nú-(ba)-má* *dàn* *tòm* *pàà* ***bèn-à***
person-2-DEF.2 if work.PFV reach.PFV year-4
pī-sìyè-lì-bàtà *bà* *pā* *kú-lé* *tɛ̀* *bá.*
twenty-three.2 CL.2 take CL.7-PROX give.PFV CL.2

'When the people have served for twenty-three years, they are given this (medal).'

Mass and liquid nouns can also be modified by numerals, especially when the referenced entities are collected in containers (186).

(186) *Zōm* *kɔ́ŋ-sá* ***sì-tà*** *lī* *m̀* *pà*
flour.9 cup-6 CL.6-three FOC 1SG take
á *mānī* *sāām-mú* .
IPFV prepare millet.gruel.9-DEF.9

'I use three cups of flour to prepare the millet gruel.'

4.1.1.7 Combining numerals with nɔ́í (pl. *nɔ́á*), *ná*, and *nántúéná*

When mass and liquid nouns are modified with numerals, their quantities are specified in relation to their containers (cf. example (186)). In such contexts the noun *nɔ́í* (pl. *nɔ́á*) 'mouth', followed by a numeral, post-modifies the container, indicate complete fullness (i.e., filled to the brim of the container) (187).

(187) *Zíí-tá* *kɔ̄līm-á* *nɔ́-á* *ŋà-yùèbì* *lī*
blood-8 bottle-4 mouth-4 CL.4-six FOC
tì *pà* *zàànì* *bà* *zúk*
1PL take.PFV put.on CL.2 top.7

'We have infused six litres of blood into them.'

香港大學圖書館 HKU Libraries

The element *ná* performs a similar function as *nɔ́í* ‘mouth’. *Ná* post-modifies pronouns referring to concrete entities to indicate their total.

(188) *Bà* ***ná*** *bà-yè* *lì* *tɔ̄g*
CL.2 in.all CL.2-two FUT explain
wé-é-ŋá *sàg* *tí.*
issue-4-DEF.4 show 1PL
‘The two of them will explain the issues to us.’

The element *nántúéná* ‘number of times’ is morphologically complex. Its constituents *nán-* and *-ná* are probably related to *náŋ* ‘leg’ and *nɔ́í* ‘mouth’ respectively.’ (189).

(189) *Bábátù* *dék* *jàm* *Sándēm* *ká*
NAME EMPH come.PFV PLACE FOC
nántúéná *ŋà* *dì-nà*?
number.of.times.4 CL.4 CL.3-INTERR
‘How many times did Babatu himself come to Sandema?’

Numerals are usually used in combination with *nántúéná* in adverbial function to express the number of times certain events occurred (190) .

(190) *Tì* *ŋòònì* *bá* *ká* ***nántúéná*** *ŋà-yè.*
1PL screen.PFV CL.2 FOC number.of.times.4 CL.9-two
‘We have screened them twice.’

香港大學圖書館 HKU Libraries

4.1.1.8 Combining numerals with sāārī

The *verb sāārī* is used with numerals to express the frequency at which an activity occurred. In this context *sāārī* is usually employed in combination with *nántúéná* 'number of times' and the numeral (191).

(191) *Wà* *tɔ̄m-mú* *jàm* *dé*
CL.1 warband.9-DEF.9 come.PFV here
sààrì *ká* *nántúéná* *ŋà-tà.*
go.up.to FOC number.of.times CL.4-three
'His warband came here thrice.'

4.1.1.9 The numeral intensifier dékí

The intensifier *dékí* emphasises numerals to indicate exactness. *Dékí* can be used to post-modify (pro-)nominals in order to indicate a restriction on the number of referenced entities. Perhaps *dékí* is related to *dék* (cf. 3.12).

(192) *Máágì* ***bà-yè*** ***dékí*** *lī* *m̀* *pà* *á*
NAME CL.2-two only FOC 1SG take IPFV
nyō *jèn-tà-ŋá* *pō.*
put soup-8-DEF.4 in
'I put only two [cubes of] maggi into the soup.'

(193) *Ŋà-tà* ***dékí*** *lī* *tàlì.*
CL.4-three only FOC remain
'Only three are left.'

香港大學圖書館 HKU Libraries

Nyīnīī performs a modifying function similar to *dékí*. As exemplified in (194), *nyīnīī* indicates a limitation or restriction on certain entities to the exclusion of others.

(194) *Tūēm-mú* *dé* *nyīnīī* *lī* *tà* *dāānī-ká.*
disease.9-DEF.9 PROX.PRSTV only FOC have disturb-NMLZ.5
'Only this disease has (caused) disturbance.'

4.1.1.10 The quantifier yéŋ 'single'

The quantifier *yéŋ* 'single, one and only' refers to one entity emphatically. *Yéŋ* is used adnominally to qualify singular nouns ((195) - (196)).

(195) *Jìg* ***yéŋ*** *lī* *tàlì.*
place single FOC remain
'A single place is left.

(196) *Bà* *tà* *ká* ***nɔ́-í*** ***yéŋ*** *nyɛ̀*
CL.2 use.PFV FOC mouth-3 single.5 do.PFV
kpālīm-mú.
fight.9-DEF.9
'They fought together with unity of purpose.'

香港大學圖書館 HKU Libraries

4.1.1.11 Expressing ordinal numerals

There is no formally distinct class of words called 'ordinal numbers'. Nonetheless, the verbal expressions *dē níŋ* 'occupy front' and *kpēglī* 'be last' are used in different ways to describe the sequential order of entities in a space. Consider, for instance, (197) and (198).

(197) *Ànàmón, wá lī* ***dē*** ***níŋ*** *jàm Bùlùk.*
NAME CL.1 FOC occupy front.5 come.PFV PLACE
'Anamon, he was the first to come to Buluk.'

(198) *(…) àtì àwīāk* ***kpèglì*** *jàm.*
CONN NAME be.last come.PFV
'…and Awiak came last.'

The deverbal expressions *níŋ dēērɔ̄* 'front occupant' and *kpēglīrɔ̄* 'last occupant', respectively, are used to refer to the first and the last humans in an ordered sequence. Aside from the second occupant, the expression *pàsàŋdɔ̀* (*pā* 'take', *sāŋ* 'hang', *dɔ̄* 'AGENT') is used together with cardinal numbers to order entities located between the second and the last human entities. Table 25 illustrates the pattern of such ordinal expressions (from second to ninth).

香港大學圖書館 HKU Libraries

Table 25: Ordinal numerals

Ordinal numeral	Translation
pàsàŋdɔ̀	second
pàsàŋdɔ̀ -yè	third
pàsàŋdɔ̀ -tà	fourth
pàsàŋdɔ̀ -nàànsì	fifth
pàsàŋdɔ̀ -nù	sixth
pàsàŋdɔ̀ -yùèbì	seventh
pàsàŋdɔ̀ -yùèpɔ̄ī	eighth
pàsàŋdɔ̀ nāānīŋ	ninth
pàsàŋdɔ̀ nèūk	tenth

4.1.2 Non-numeral quantifiers

Non-numeral quantifiers vary in their distribution and function. They mostly have adnominal, adverbial, and pronominal uses.

4.1.2.1 míéná

The quantifier *míéná* has adnominal, adverbial, and pronominal uses. Depending on its distribution and function, *míéná* expresses meanings similar to any of the following: 'all, every, each, entire(-ly), whole(-ly)'. Example (199) illustrates the use of *míéná* adnominally to modify a noun.

(199) *Bà* *yìàgì* *nííg-á-ŋá* ***míéná*** *jò* *ká*
CL.2 drive.away.PFV cow-4-DEF.4 all enter FOC
wūūk *pō.*
bush.7 in
'They drove all the cattle into a bush.'

香港大學圖書館 HKU Libraries

Míéná can also be used adnominally to modify pronouns (200). In this use, *míéná* indicates the totality of entities referenced by the pronoun.

(200) *Sì* ***mièná*** *chàlì* *ká=mā.*
CL.6 all escape.PFV FOC=PRED.EMPH
'All of them (the livestock) escaped.'

Míéná usually modifies plural (pro-)nominals, but there are contexts where it can be used with singular nouns. In such contexts, the noun represents a whole class or category, and *míéná* indicates inclusivity of every part of the group or collection.

(201) *Àchám* *wù* *àyén* *nú-(ba)* *míéná* *zāānī* *gérím.*
NAME call.out.PFV QUOT person-1 all stand firm:IDEO
'Acham called out that everyone should stand firm.

(202) *(...)* *àtì* *bà* *kàlì* *tìim-mú* *zúk* *yōk* *míéná.*
CONN CL.2 sit.PFV tree.9-DEF.9 top.7 night.7 all
'… and they sat on the tree all night.'

The use of *míéná* together with nouns to express 'wholeness' is more evident in contexts where the referenced entity is presented as a complete thing. The noun, in this case, is marked for definiteness.

香港大學圖書館 HKU Libraries

(203) *Wá(ri)-ní* *míéná* *nī* *lá.*
issue.3-DEF.3 all FOC CDM
'That is the whole issue.'

(204) *Fì* *kàn* *tɛ̄* *tì* *jùm-mú* *míéná* *á* *yɔ̄tī.*
2SG NEG.IPFV let COMP fish.9-DEF.9 all IPFV dissolve
'You do not let the whole fish dissolve.'

Míéná is used pronominally in contexts where the referent is known or can be inferred from the preceding discourse.

(205) *Kpīīrī* *míéná* *nyò* *bìmbìl(i)-ní* *pō.*
pour all put.into cooking.pot.3-DEF.3 in
'Pour all into the cooking pot.'

The period of time within which an event or an action occurs may be quantified to show how much time the event or action lasts. In this case, *míéná* typically modifies temporal nouns (e.g. *sàlùúk* 'morning' and *bákɔ̀ì*) as illustrated in (206).

(206) *Bà* *yìtì* *ká* *sàlùúk* *míéná* *á* *kūm.*
CL.2 wake.up.PFV FOC morning.7 all IPFV cry
'They woke up every morning and kept crying.'

香港大學圖書館 HKU Libraries

4.1.2.2 *gēlā*

Gēlā is used adnominally (207) or pronominally (208) to indicate a portion or remainder of an entity.

(207) *Mí sēb nú-(ba)-má gēlā dièm*
1SG know person-2-DEF.2 some still
bō wòònì-nyá-ká dɔ̀k-kú.
be.located screen-see-NMLZ.5 house.7-DEF.7
'I know that some of the people are still at the screening centre.'

(208) *Gēlā ŋmàn kā tùìk-ká pō.*
some again not.located mortar.5-DEF.5 in
'There is no more (groundnut) left in the mortar.'

4.1.2.3 màgà

Màgà can be used adnominally (209) or pronominally (210) to quantity an entity or a situation. *Màgà* 'little, few' indicates a small amount or degree.

(209) *Púpól-á màgà lī tà tàmá dā-ā-ŋá dé.*
thought-4 few FOC grip.PFV 1PL.INCL day-4-DEF.4 PROX
'A few thoughts have occupied us these days.'

(210) *Bá mɛ̄ dàn gɔ̀à màgà bà ŋmān yìtì*
CL.2 also when sleep.PFV little CL.2 again rise.PFV
'When they also slept a little, they woke up again.'

香港大學圖書館 HKU Libraries

4.1.2.4 *yègà*

Yègà 'a lot, many' is often used adnominally or adverbially to indicate a large amount or degree. Less frequently, *yègà* is used as a pronominal modifier where it indicates the inclusiveness of a greater portion of certain referents in relation to the action or state described (211). In its adverbial use, *yègà* indicates the extent or intensity of an action or state (212).

(211) *Àmòàk* *dɔ̀k-kú* *nípō-(ba)-má* *yègà* *ká* *àdànlíé.*
NAME house.7-DEF.7 woman-2-DEF.2 a.lot FOC NAME
'A lot of women in Amoak's house are Adanlie.'

(212) *Fì* *kàn* *tɛ̄* *tì* *kù* *á* *vāāsī* *yègà.*
2SG NEG.IPFV let SUB CL.7 IPFV boil a.lot
'You do not let it boil too much'

4.1.2.5 *wùù*

Wùù is used adverbially, usually together with *míéná* to indicate 'entirety'. In such contexts, *wùù* adds emphasis to the state of the referent (213)-(214).

(213) *Jāāb* *míéná* *wùù* *bò* *nààwén*
thing.9 all entirely be.located god.3
ní-sá *pō.*
hand-6 in
'Everything is entirely in the hands of God.'

(214) *Níígá-ŋá* *dé* *wùù* *ká* *Àyárík* *lī* *sɔ̄ā.*
cow.4-DEF.4 PROX entirely:IDEO FOC NAME FOC own
'All these cattle are owned by Ayarik.'

香港大學圖書館 HKU Libraries

4.2 Noun-noun modification

Two nouns can be juxtaposed to yield associative constructions that perform a range of functions. Such constructions usually express possession. In this context the initial noun is a possessor (modifier), with the noun coming after being a possessum or possessed (modified) entity. The possessor can be substituted with a possessive pronominal, as (216) illustrates.

Possession

(215) *Bábátù* *tɔ̄m*
NAME warband.9
'A warband of Babatu'

(216) *Wà* *tɔ̄m*
CL.1 warband.9
'His warband'

(217) *Félík* *tɛ̄ŋ*
white.man.5 land.5
'Land of a Whiteman' (America/Europe)

(218) *Nú(rí)* *bíík*
person.1 child.5
'Child of a person (mankind)'

香港大學圖書館 HKU Libraries

Aside from expressing possession, juxtaposed noun–noun constructions may express relations of kin (219), ethnicity or society membership (220), resource–product (221), part–whole (222), or garment (accessory)–body part (223) relationship.

Kinship relationship

(219) *Àlízábɛ̀t* *líé*
NAME daughter.1

'Daughter of Elizabeth'

Society membership

(220) *Dàgbɔ̀ŋ* *nù-(ba)-má*
PLACE.7 person-2-DEF.2

'The people of Dagbong'

Product-resource

(221) *Wɔ̄g-tā* *jèn-tà*
sabdariffa-8 soup-8

'Sabdariffa soup'

Part-whole relationship

(222) *Tì* *púpól-à*
1PL thought-4

'Our thoughts'

Garment (accessory)-body part

(223) *Chīāk* *gbáŋ*
waist.5 hide.5

'Hide of waist ('belt')'

香港大學圖書館 HKU Libraries

Many noun–noun constructions have extended uses. These constructions include body-part nouns whose concrete meanings have been extended to cover abstract concepts such as spatial-locations (224) or sequential order (225).

(224) *Chān-ní* *ŋààŋ*
shea.tree.3-DEF.3 back.5

'The bark of the shea tree' / 'Behind the shea tree'

(225) *Àdēm* *ŋààŋ*
NAME back.5

'The back [younger sibling] of Adem'

A notable case is the diminutive function of *bíík* existing alongside its lexical meaning. Compare (226) to (227).

(226) *Wááb* *bíík*
snake.9 child.5

'offspring of a snake' / 'small snake'

(227) *Kò* *bìík*
father.1 child.5

'father's child (sibling)'

香港大學圖書館 HKU Libraries

Some noun–noun constructions carry idiomatic meanings in addition to their basic meanings. Without knowledge of certain elements of Bulisa culture, it is nearly impossible to derive such idiomatic meanings from the components of the construction. This is illustrated in (228)-(230).

(228) *dɔ̀k* *líé*
house.7 maid.1
'maid of house ('cat')'

(229) *ním*[22] *bí-rí*
eye.3 seed-3
'seed of face ('eye')

(230) *nààb* *wén*
chief.1 sky.3
'sky of chief' ('god')

Some noun–noun constructions contain loanwords and calques, as is the case with *gbīēsī* (231).

(231) *Nín-(a)* *gbìès-à*
eye-4 glass-4
'glasses of eyes' ('eyeglasses')

香港大學圖書館 HKU Libraries

[22] Also *núm* 'eye'

The corpus contains some unsegmentable noun–noun constructions of which the meaning of one or both components appear to be lost presently. This is shown in (232)-(235). The question marks indicate that the translations provided are based on my own analogies.

(232) *ní-pōk*
?person-wife.1
'woman'

(233) *ní-dɔ́*
?person-friend.1
'man'

(234) *tān-bùsùŋ*
stone.7-?particle
'sand'

(235) *zúk-tɔ̄k*
head.7-?gear
'hat'

香港大學圖書館 HKU Libraries

4.3 Nominal derivation

The morphological elements *-tìrì, -nì, -dēnɔ̄* (pl. *-dēm*), and *-nyɔ̄nɔ̄* (pl. *-nyām*) are attached to nouns to derive complex nouns that express various relations and meanings (see Table 26). At present, some of the (nominal) forms to which these elements attach have lost properties which makes their original form and/or meanings difficult their determine. Morphological changes sometimes affect the shape of the derived nouns.

When *-tìrì* and *-nì* are attached to nouns, they indicate a state, condition, or quality of a referent. The syllables in these *-tìrì,* and *-nì* are probably related to the class markers (cf. *tì* 'CL.8', *-rí* 'CL.3', and *-ní* 'DEF.3').

Table 26: Nominal derivation with *-tìrì* and *-nì*

Noun	Translation	Consituents
bímbààŋ-ǹtìrì *bímbààŋ-nì* *bílɔ̀ɔ̀nì*	childhood	*bíík* 'child', *ǹ-* 'PRT', *bààŋ, -tìrì /-nì* *bíík, -lɔ̀ɔ̀k* 'little', *- tìrì /-nì*
nísɔ̀m-ǹtìrì	old age, senescence	*nísɔ̀m* 'aged person', *-tìrì*
dɔ̀klìè-ǹtìrì *dɔ̀klìènì*	maidservanthood	*dɔ̀klìè* 'maidservant', *ǹ-* 'PRT', *-tìrì /-nì*
sàkpàk-ǹtìrì *sàkpàknì*	witchcraft	*sàkpák* 'witch', *ǹ-* 'PRT', *-tìrì /-nì*
dàkɔ̀k-ǹtìrì, *dàkɔ̀knì*	celibacy, bachelorhood, widowerhood	*dàkɔ̀k* 'bachelor', *ǹ-* 'PRT', *-tìrì /-nì*

The element ***-tìrì*** can derive nouns from verbs (e.g. *nyààntìrì* 'brightness/clearness' > *nyāāntī* 'to shine' *-tìrì*). Nonetheless, this derivational process is much less productive.

香港大學圖書館 HKU Libraries

When speakers attach *-dēnɔ̄* (pl. *-dēm*) to a noun, it indicates that certain human(s) are related to a clan, place, or community (see Table 27). The majority of toponyms referring to Buli towns/villages are derived from the suffix *-dēm*. The forms to which *-dēm* is attached resemble certain nouns commonly mentioned in urban legends as the etymology of these town/village names.

Table 27: Nominal derivation with *-dēnɔ̄* (pl.*-dēm*)

Noun	Translation	Etymological constituents
Kàdēnɔ̄	indigene of Kadema	?*kàrìk* (*kà-*) 'shin',
Kàdēm(má)	indigenes of Kadema	*-dēnɔ̄* /*-dēm, má* 'DEF.2'
Wīāk-dēnɔ̄	indigene of Wiaga	?*wīɔ̄k* 'thigh/hip',
Wīāk-dēm(má)	indigenes of Wiaga	*-dēnɔ̄* /*-dēm, má* 'DEF.2'
Sán-dēnɔ̄	indigene of Sandema	?*sùnúm* 'chest',
Sándēm(má)	indigenes of Sandema	*-dēnɔ̄* /*-dēm, má* 'DEF.2'
Sīnìènsì	indigene of Siniensi	?*sìnsám-lúúk* (urine-tract)
Sīnìènsì-dēm(má)	indigenes of Siniensi	'bladder', *sì*/*-sà* 'CL.6'), *-dēnɔ̄* /*-dēm má* 'DEF.2'
Gbèdēnɔ̄	indigene of Gbedema	?*gbè, -dēnɔ̄* /*-dēm, má* 'DEF.2'
Gbèdēm(má)	indigenes of Gbedema	
Nyádēnɔ̄	indigenes of Nyadema	?*nyá, -dēnɔ̄* /*-dēm, má* 'DEF.2'
Nyádēm(má)	indigenes of Nyadema	
Kùmásí-dēnɔ̄	person from Kumasi	Kumasi, *-dēnɔ̄* /*-dēm, má* 'DEF.2'
Kùmásí-dēm(má)	persons from Kumasi	
Àlátá-dēnɔ̄	Nigerian	Alata 'Nigeria', *-dēnɔ̄* /*-dēm,*
Àlátá-dēm(má)	Nigerians	*má* 'DEF.2'
dɔ̀k-dēm	clan/family member	*dɔ̀k 'room', -dēnɔ̄* /*-dēm, má* 'DEF.2'
dɔ̀k-dēm(má)	clan/family members	

香港大學圖書館 HKU Libraries

The element *-nyɔ̄nɔ̄* (pl. *-nyām*) is used in combination with to nouns to indicate ownership or possession (see Table 28). In this context, *-nyɔ̄nɔ̄* typically refers to a human that owns an entity, whereas the noun refers to the entity owned by this human. Qualities are also commonly ascribed to humans using similar constructions to suggest that a human 'owns/possesses' a quality.

Table 28: Nominal derivation with *-nyɔ̄nɔ̄* (pl. *nyām*)

Noun	Translation	Constituents
bùtūēm nyɔ̄nɔ̄	selfish person	*bùtūēm* 'selfish', *nyɔ̄nɔ̄* 'owner'
pūūk nyɔ̄nɔ̄	pregnant woman	*pūūk* 'belly', *nyɔ̄nɔ̄* 'owner'
yíé nyām	landlords	*yíé* 'houses', *nyām* 'owners'
būūk nyām	goat owners	*būūk* 'goat', *nyām* 'owners'
līgrā nyām	affluent people	*līgrā* 'monies', *nyām* 'owners'

香港大學圖書館 HKU Libraries

4.4 Personal name marker *a-*

Personal names are complex nouns whose individual constituents come from various lexical categories. The vast majority of native personal names begin with the prefix *a-*. Loaned personal names are prefixed with *a-* if their initial sound is not a vowel. If a loaned personal name has a vowel as an initial sound other than *a-*, that vowel is typically replaced with *a-* .Examples (236)–(245) are some personal names.

(236) *À-fèlík*
PERS-white.man
'NAME' (given to a child who is fair in complexion)

(237) *À-kúm-kā-dɔ̄*
PERS-death-lack-friend
'NAME' (given by a person who has lost loved ones)

(238) *À-gbèdēm*
PERS-PLACE
'NAME' (given to a baby with Gbedem ancestry)

(239) *À-kàn-kīsī*
PERS-NEG-hate
'NAME' (given to a child expected to accept unfavourable situations)

(240) *À-yɔ̀mà*
PERS-slave
'NAME' (given by a person who endured slavery)

(241) *À-nyɛ̄-tì-kù-nīāk*
PERS-do-for-it-right
'NAME' (given to a child expected to have good moral character)

香港大學圖書館 HKU Libraries

(242) *À-sɔ́ndé*
PERS-sunday
'NAME' (English loanword [Sunday]; given to a child born on Sunday)

(243) *À-làmísí*
PERS-thursday
'NAME' (Hausa loanword [Alhamis]; given to a child born on Thursday)

(244) *À-kòfí*
PERS-NAME
'NAME' (Akan loanword [Kofi]; given to a child born on a Friday)

(245) *À-lízábɛ̀t*
PERS.NAME
'NAME' (English loanword [Elizabeth]; biblical name)

香港大學圖書館 HKU Libraries

4.5 Reduplicated nouns

Some complex nouns are the outcome of partial or full reduplication of verbs. The vowel of the reduplicant is typically a close vowel. It is /i/ when V1 of the verb root is a front vowel and /u/ when the first vowel of the verb stem is a back vowel. Table 29 is a list of some reduplicated nouns and the verbs from which they derive (see also Akanlig-Pare 1999: 99–109).

Table 29: Reduplicated nouns derived from verbs

Singular	Plural	Gloss	Verb
fífíɔ́k	*fífáátà*	compulsion	*fɛ̄* 'compel'
sìnsàgì	*sìnsàgà*	instruction	*sāgī* 'to instruct'
nínám	-	suffering	*nām* 'to suffer'
chíchám	*chíchámà*	doubt	*chām* 'to doubt'
kínkésí(rí)	*kínkésímà*	litigation	*kēsīm* 'to litigate'
fúnfɔ́blí	*fúnfɔ́blà*	complaint	*fɔ̄blī* 'to complain'
tútúní	*tútúnà*	salary	*tūnī* 'to pay'
sìnsám	*sìnsántà*	urine	*sām* 'to urinate'
púpólí	*púpólà*	thought	*pōlī* 'to think'
súsúgí	*súsúgà*	secret	*sūgī* 'to hide'

香港大學圖書館 HKU Libraries

4.6 Repetition

4.6.1 General repetition

Most of the word classes discussed so far can be repeated in certain syntactic contexts to yield various meanings, such as collective, cumulative, distributive, emphatic, and intensifying meanings (see Table 30). Some elements are typically repeated once, whereas others are repeated twice or more. Repetition applies differently to various elements in different syntactic contexts.

Table 30: Functions of repetition

Category	Example	Function
Noun	*núrí* 'person'	collective/intensifying
	bíík 'child'	
	jāāb 'thing'	
	jíg 'place'	
	jùīk 'place'	
Pronoun	*wáí* 'CL.1.REL'	collective/intensifying
Property noun	*-jétík* 'thin'	intensifying
	-túílík 'hot'	
Quantifier (numeral)	*wànyī* 'one'	distributive,
	bàyè 'two'	sequential
Quantifier (non-numeral)	*màgà* 'little'	cumulative
	yègà 'a lot'	intensifying
	míéná 'all'	intensifying
Adverbial modifier	*tā* 'PRT'	intensifying
	mā 'PRT'	intensifying

Pro(-nominals) are sometimes repeated in negative clauses where they express meanings similar to English 'nobody' and 'any'. Repeating a noun, as illustrated in (246) and (247), imparts an intensifying meaning to the situation of the referent.

香港大學圖書館 HKU Libraries

(246) ***Núrí*** ***núrí*** *àn* *bāg* *zààn* *yà.*
person.1 person.1 NEG.PFV be.able stand.PFV PRF
'Nobody (not a single person) could stand.'

(247) ***Jāāb*** ***jāāb*** *kā=ró* *á* *dāānī* *wà.*
thing.9 thing.9 not.located=there IPFV disturb CL.1
'There is nothing (not a single issue) disturbing him.'

As (248) illustrates, nominals can be repeated in affirmative contexts. If this repetition is used in combination with a quantifier like *míéná*, it indicates that certain locations are collectively included. Without the quantifier *míéná* in (249), the construction refers to an indefinite or unrestricted set of locations.

(248) ***Jùīk*** ***jùīk*** *míéná* *wà* *chɛ̀ŋ* *lá*
place.7 place.7 all CL.1 go.PFV CDM
bà *và=á=mā*
CL.2 follow.PFV=FOC=PRED.EMPH
'Everywhere he went, they followed.'

(249) *Tɛ̄ŋ-ká* *dàn* *sɔ̀blì* *bá* ***jùīk*** ***jùīk,***
land.5-DEF.5 if grow.dark.PFV CL.2 place.7 place.7
bà *gɔ̄ā.*
CL.2 sleep
'If darkness caught up with them anywhere, they would sleep (there).'

香港大學圖書館 HKU Libraries

Property nominals can be repeated to intensify the quality ascribed to the referent of a noun (250).

(250)	*Fì*	*kpīīrī*	*nyò*	*nyá-**túílík***	***túílík***	*pō.*
	2SG	pour	pour.into	water.9-hot.5	hot.5	in

'You pour (it) into very hot water.'

Numerals can be repeated to convey sequential (251) and distributive (252) meanings.

(251)	*Kpāg-(sa)-ŋá*		*lì*	*tɔ̄gī*	*wíé-ŋá*	***wà-nyī***
	leader-6-DEF.4		FUT	discuss	issue.4-DEF.4	CL.1-one
	wà-nyī	*sàg*		*tí.*		
	CL.1-one	show		2PL		

'The leaders will explain the issues one by one to us.'

(252)	*Tì*	*līŋ*	*tɛ̀*	*ní*	*ká*	***ŋà-nù***	***ŋà-nù***
	1PL	initially	give.PFV	2PL	FOC	CL.4-five	CL.4-five

'Initially, we gave you five each.'

Míéná inherently indicates collectiveness, but when repeated, it also conveys an intensifying meaning (253). *Yègà* can be repeated to express emphasis or frequency (254). Similarly, *màgà* can be repeated to denote frequency and cumulative meanings (255).

(253)	*Bábátù*	*kààsì*	*tèŋ*	*sì-lá*	***míéná***	***míéná.***
	NAME	destroy.PFV	land.5	CL.6-DIST	all	all

'Babatu destroyed all of those lands entirely.'

香港大學圖書館 HKU Libraries

(254) *(...)* *à* *kààsì* *Wàgàdúgú* *tɛ̄ŋ-ká* ***yègà*** ***yègà*** ***yègà***.
SC destroy.PFV PLACE land.5-DEF.5 a.lot a.lot a.lot

'… and (he) caused extensive destruction to the land in Ouagadougou.'

(255) *Bù* *vāāsī* ***màgà*** ***màgà*** *à* *gà* *bè.*
CL.9 boil little little SC go be.cook.ready

'It should boil little-by-little until it is cooked (ready).'

4.6.2 Repeating *tā* and *mā*

The particles *tā* and *mā* are always repeated to emphasise a long duration or delay (as seen in (256)-(257)). Each of them is repeated to indicate that a situation was prolonged. They indicate an unexpected progression of a situation until a certain period of time or location. *Tā* seems to be related to the verb *tā* 'hold unto, grasp', such that repeating it implies persistently holding onto a situation over a long period of time.

(256) *(...)* *àtì* *pō-(ba)-má* *kùm* ***tā-tā-tā-tā***
CONN wife-2-DEF.2 cry.PFV INTENS
à *vìèntì* *vā-rī.*
SC open.PFV day-3

'… and the wives cried persistently until day broke.'

(257) *Nyìnì* *dàām* ***mā-mā-mā,*** *bà* *àn*
since few.days.ago INTENS CL.2 NEG
dìēm *tùèsì* *tììm-mú*
still collect medicine.9-DEF.9

'Since the last three days, they have still not collected the medicine.'

香港大學圖書館 HKU Libraries

4.7 Adverbial modifiers

A range of lexical items, including nouns and verbs, express manner, temporal, aspectual, locative, and modal notions. Common nouns such as body part terms (e.g. *zúk* 'head', *ŋààŋ* 'back'), days and weather nouns (e.g. *sàlùúk* 'morning', *wén* 'sky') and entities in the surrounding (e.g. *dɔ̀k* 'room') can serve locative-adverbial functions by indicating location, relationships between entities in space, and time. Similarly, some verbs function as locative-adverbial functions by specifying the relation between entities in space (e.g. *mɔ̄tī* 'be near') or as manner-adverbials that express the manner in which an entity is positioned or situated in relation to other entities. Various lexical items (e.g. quantifiers, ideophones), phrases, and clauses can perform adverbial-modifying functions. In some serial verb constructions, one of the verbs may serve as an adverbial modifier by describing the situation or state encoded by the other verb.

This section provides a brief description of lexical items that perform adverbial-modifying functions. Such adverbial modifiers are usually used to modify verbs or predicates where they express various aspectual, manner-adverbial, and modal notions.

4.7.1 *pīlīm, ŋmān ~ ŋmànà* 'repetitive'

Pīlīm and *ŋmān* are often used interchangeably to modify verbs, indicating that the action denoted by the main verb was repeated. Individually, *pīlīm* typically conveys a meaning similar to 'do again' (258), while ŋmān conveys a meaning similar to 'return' (259). The two can be used together in no particular order (260), but this does not create a significant difference in meaning compared to their individual use.

香港大學圖書館 HKU Libraries

(258) *M̀* ***pīlīm*** *á* *dām* *ká=mā*
1SG do.again IPFV stir FOC=PRED.EMPH
'I stir it again.'

(259) *(...)* *àlī* ***ŋmàn*** *kààsì* *Kūnkūōk.*
and do.again destroy.PFV PLACE
'… and (he) again destroyed Kunkuok.'

(260) *Wà* *tɔ̄m-mú* *àn* ***pìlím*** ***ŋmàn***
CL.1 warband.9-DEF.9 NEG.PFV do.again return
jàm *dé*
come.PFV here
'His warband did not come back here again.'

4.7.2 *ŋmānsī* 'steadfastly'

Ŋmānsī modifies a verb to indicate that the situation denoted by the verb is carried out with a strong sense of resolve, determination, or firmness (261).

(261) *Bábátù* ***ŋmànsì*** *kààsì* *nú-bá* *bō-ká.*
NAME steadfastly destroy.PFV person-2 live-NMLZ.5
'Babatu steadfastly destroyed people's livelihood.'

香港大學圖書館 HKU Libraries

4.7.3 *ǹwūlī* ‘early, quickly’

Ǹwūlī expresses the meaning that an action that the verb denotes has to be performed without delay (262). The variant *àwūlī* is also used quite frequently (263).

(262) *Fì* *yàà* *pōlīm* *bú* ***ǹwūlī.***
2SG then whisk CL.9 quickly

‘You then whisk it (millet gruel) rapidly.’

(263) *Tì* *dàn* *ŋòònì* *nú-bá* ***àwūlī.***
1PL if screen person-2 quickly
tūēm-mú *lì* *sīŋ* *tēŋ.*
disease-DEF.9 FUT drop ground.5

‘If we screen people early, the disease will decline.’

4.7.4 *dièm ~ dièmà* ‘still, yet’

Dièm indicates that a state or situation denoted by a verb persists or is ongoing (264)-(265).

(264) *Kwìn* *àlízábɛ̀t!* *Wá-lá* *líé* *lī* ***dièm***
queen NAME CL.1-DIST daughter.1 FOC still
á *dē* *nāām-mú* *bò*
IPFV reign kingdomhood.9-DEF.9 be.located
félí-(k) *tēŋ*
whiteman-(5) land.5

‘Queen Elizabeth! Her daughter is still reigning as monarch of Britain.’

香港大學圖書館 HKU Libraries

(265) *Tūēm-mú* *àn* ***dìēm*** *bàsì* *yà.*
disease.9-DEF.9 NEG still stop PRF
'The disease has not yet ceased.'

4.7.5 *dērī ~ dèrà* 'suddenly, immediately'

Dērī modifies a verb to indicate that the action which the verb denotes takes place unexpectedly and without delay (266).

(266) *Àchám* ***dèrì*** *kàárì…*
NAME suddenly scream.PFV
'Acham screamed suddenly…'

4.7.6 *sūm ~ sùmà* 'truly, indeed'

Sūm indicates that a situation is veritable, emphasising the occurrence of the situation denoted by the verb (267).

(267) *Tì* *sūm* *lìg* *bān-ní* *ká=mā.*
1PL truly close.PFV border.3-DEF.3 FOC=PRED.EMPH
'We have truly closed the border.'

香港大學圖書館 HKU Libraries

4.7.7 *dìn* 'persistently'

Dìn indicates that a situation or state continues in a steadfast manner (268).

(268) *Wà* ***dìn*** *á* *kāāsī* *tɛ̄ŋ-sā-ŋá* *ká* *dí-lá.*
CL.1 persistently IPFV destroy land-6-DEF.4 FOC CL.3-DIST
'He persistently kept destroying communities in that manner.'

4.7.8 *nyīēm* 'habitually, usually'

Nyīēm indicates that a situation occurs on a regular basis. *Nyīēm* also functions as an independent verb with the meaning 'to roam about'.

(269) *(...)* *àtì* *bà* ***nyìēm*** *tūēsī* *nípō-(ba)-má.*
CONN CL.2 usually seize woman-2-DEF.2
'… and they usually seize the women.'

4.7.9 *tɔ̄g(-ní)* 'really'

Tɔ̄g(-ní) expresses a meaning similar to 'really' or 'anyway,' often adding emphasis to a situation or state (270). It highlights or underscores the quality of a situation. Additionally, it functions as a topic marker in certain contexts (§ 11.5).

(270) *Wà* ***tɔ̄g*** *kā* *jīīrīm.*
CL.1 really lack compassion
'He really lacks compassion.'

香港大學圖書館 HKU Libraries

4.7.10 *ŋāām* 'in advance'

Ŋāām modifies an action to mark it as preemptive, without which an unfavorable situation would occur. Example (271), an excerpt in a narrative, is a command issued by a chief priest to Bulisa to be ready for war.

(271) *Bùlìsà* ***ŋāām*** *yìtì.*
NAME in.advance rise
'Bulisa should arise in advance.'

4.7.11 *bùrá* 'unexpectedly'

Bùrá signals an unexpected situation or state (272).

(272) *Tì* ***bùrá*** *wààŋ* *yègà.*
CL.8 unexpectedly spread.PFV a.lot
'They (viruses) have unexpectedly spread a lot.'

4.7.12 *mànà* 'unquestionably'

Mànà functions as a terminal marker that signals insistence on the need for an action to be performed (273).

(273) *Bà* *līg* *bān-ā-ŋá* ***mànà***
CL.2 close border-4-DEF.4 unquestionably
'They should, unquestionably, close the borders.'

香港大學圖書館 HKU Libraries

4.7.13 *pōōm* ‘anyway, nevertheless’

Pōōm places emphasis on the happening of a situation, regardless of any conflicting or contradicting factors (274). *Pōōm* is usually employed in complex clauses, especially in counter-factual conditional clauses to express a meaning similar to 'even if' (275).

(274) *Nì* ***pōōm*** *bàsì.*
1PL anyway cease
‘Cease (the fight) anyway.’

(275) *Fì* *dàn* ***pòòm*** *sààlìm* *bà* *yīg* *fú.*
2SG if even.if plead.PFV CL.2 capture 2SG
‘Even if you pleaded, they would capture you.’

4.7.14 *ná* ‘perhaps’

Ná suggests the likelihood of a situation or state occurring based on prevailing circumstances (276).

(276) *Ŋà* *ná* *bè=é* *sàg-ní* *pō.*
CL.4 perhaps get.lost.PFV=FOC forest.3-DEF.3 in
‘They (cattle) probably went missing in the forest.’

香港大學圖書館 HKU Libraries

4.7.15 *nín* 'in case, what if'

Nín functions as a hypothetical marker that indicates speculation about a situation or state (277).

(277) *Wà* *tɔ̄m-mú* *nín* *gēb* *bá* *súúk…*
CL.1 warband.9-DEF.9 in.case cross CL.2 path.7…

` 'In case his warband crosses them on the...'

4.7.16 *mɔ̀à*

Mɔ̀à 'at all' emphasises the possibility or likelihood of a situation not occurring, often contrary to what was anticipated (278).

(278) *Bà* *kàn* *gɔ̄ā* ***mɔ̀à***?
CL.2 NEG.IPFV sleep at.all
'Do they not sleep at all?'

4.7.17 *yáán* 'most likely'

Yáán expresses a high probability of the occurrence of a situation or state based on certain evidence (279).

(279) *Bà* *yáán* *pàárì* *ká* *Wa.*
CL.2 most.likely reach.PFV FOC NAME
'They most likely arrived in Wa.'

香港大學圖書館 HKU Libraries

4.7.18 *tɔ̄rīm* 'at all odds'

Tɔ̄rīm is sometimes used in conditional constructions to emphasise that a condition that needs to be fulfilled requires great effort.

(280)	*Wà*	*dàn*	*tɔ̀rìm*	*yìg*	*fú*	*fì*	*kpì=í=mā.*
	CL.1	if	at.all.odds	capture.PFV	2SG	2SG	die.PFV =FOC=PRED.EMPH

'If he managed to catch you at all odds, you are dead.'

4.7.19 *nyìnì* 'since, from'

Nyìnì has prepositional uses, for indicating a point in time or an event that serves as a starting point (281)(282). *Nyìnì* derives from the verb *nyīnī* 'go out, originate'.

(281)	*(...)*	***nyìnì***	*chūm*	*nì*	*wá-í*	*kán*	*nyīnī*
		from	tomorrow	2PL	CL.1-REL	NEG.IMP	go.out
		pièlīm.					
		outside.9					

'… from tomorrow, none of you should go outside.'

(282)	*(...)*	***nyìnì***	*dài*	*dì-lá,*	*Bùlìsà*	*nyà*
		since	day.3	CL.3-DIST	NAME.6	gain.PFV
		nyìŋ-yɔ̀g-sá.				
		body-cool-6				

'…since that day, Bulisa gained peace.'

香港大學圖書館 HKU Libraries

4.7.20 Distribution of adverbial modifiers

Adverbial modifiers normally precede the verb or predicate that they modify. However, some adverbial modifiers occur after the verb or predicate, usually as utterance-final elements. These adverbial modifiers are *pīlīm* ‘again’, *ŋmān* ‘steadfastly’, *dièm* ‘still’, *dērī* ‘immediately’, *súm* ‘truly, indeed’, and *pōōm* ‘anyway’. If these adverbial modifiers occur as utterance-final elements, they bear the suffix *-a* (i.e., *pìlìmà* ‘again’, *ŋmànà* ‘steadfastly’, *dièmà* ‘still’, *dèrà* ‘immediately’, *pòòmà* ‘anyway’) and their tone is usually low (283)-(284).

(283) *Tì* *lì* *tēbī* *bá* *dèrà.*
1PL FUT treat CL.2 immediately
‘We will treat them immediately.’

(284) *Tūēm-mú* *wààŋ* *ká=mā* *sùmà.*
disease-DEF.9 spread.PFV FOC=PRED.EMPH truly
‘Truly the disease has spread indeed.’

香港大學圖書館 HKU Libraries

4.8 Ideophones

As with many other African languages, Buli has "marked words that depict sensory imagery" (Dingemanse 2012: 654) called ideophones. Ideophones essentially impress upon or provoke human senses to sufficiently appreciate every relevant detail about a situation or state. No serious investigations about Buli ideophones exist, but Kröger (2020) already recognises the following facts about Buli ideophones: they contain reduplicated elements, they are usually introduced by the demonstrative identifier *ǹnā*, they mostly occur as sentence-final elements, and they express a range of situations and states. Kröger (2020) also claims that Buli ideophones mostly bear Low tone, but this is inconsistent with my data. Further, contrary to Kröger (2020), I do not consider repeated words like *fíík fíík* ('small, small') 'little, tiny' to be ideophones. Table 31 presents some examples of Buli ideophones.

香港大學圖書館 HKU Libraries

Table 31: Ideophones

Ideophone	**Translation**	**Ideophone**	**Translation**
bág-bág	piping hot	*kpáŋ kpáŋ*	absolute best
sàr.tá.tá.tá	flee (in a flurry)	*pàànà pàànà*	walk aimlessly
pàr.pàr.pàr	walk briskly	*díŋ díŋ*	stony hard
tìr	completely abstain	*tág tág*	stinky smell
fér.té.té.té	vanish completely	*mìɔ̀k mìɔ̀k*	mushy soft
chór.tó.tó.tó	dead silent	*lúŋ lúŋ*	extremely deep
ŋmí.kí.kí.kí	bitterly cold	*làngà lángá*	excessively thin
sí.kí.kí.kí.kí	completely silent	*fáálàá*	overly cheap
lìmm	pitch dark	*dùtìbì*	terminate completely
mápí~chápí	chock-full	*nyàgmàà*[23]	awful

Many Buli ideophones consist of a few syllables – usually one or two – and the final syllable can be reduplicated or repeated. A bilabial nasal or liquid ending a monosyllabic ideophone (e.g. *lìmm* 'pitch dark', *tìr* 'never') is usually realised with a longer duration if reduplication does not apply. Reduplication or repetition and lengthening have the significance of broaching a listener's senses to paint vivid and extensive imagery of a situation or state. This is normally reinforced by means of facial expressions and gestures. Morphological elements, be they inflectional or derivational, are rarely attached to ideophones.

Ideophones constitute independent utterances, and they ascribe qualities to entities or describe existing qualities of entities. The position of an ideophone in a

[23] Also in Akan as '*nyàmàà*'

clause is relatively more varied than other lexical categories. The following sentences show nominal (285), adverbial (286), and adjectival (attributive) (287) uses of ideophones.

(285) ***Síkí*** *kàn* *kō.*
complete.silence:IDEO NEG.IPFV kill
'Being completely silent does not kill.' ('Silence is golden')

(286) *Nyíám-mú* *dàn* *tòlìŋ* ***bág-bág,*** *fì*
water-DEF.9 when heat.up briskly.hot:IDEO 2SG
nyāg.
take.off.fire
'When the water heats up until it is piping hot, you take it off (the fire)'

(287) *Bà* *tà=á* *wíé* ***nyàgmàà*** *jàm*
CL.2 have=FOC issue.4 filthy:IDEO come.PFV
'They have brought filthy issues.'

Quite often, ideophones that express manner-adverbial notions modify the light verb *nyɛ̄* 'do' (288).

(288) *Wɔ̄g-tā-ŋá* *kàn* *nyɛ̄* ***mìɔ̀k-mìɔ̀k.***
sabdarifa-8-DEF.4 NEG.IPFV do mushy.soft:IDEO
'The sabdariffas do not become mushy soft.'

Ideophones and entities they modify can form special reduced constructions in Buli. Consider, for instance, (289). In this kind of construction, although not explicitly stated, the event or state can be inferred from the meaning of the ideophone.

香港大學圖書館 HKU Libraries

(289) *Àchám* *dàn* *wù,* *bà* ***síkí.***
NAME when call CL.2 completely.silent:IDEO
'When Acham calls out, they remain completely silent.'

The ideophone *tír* 'never' is normally used in the way illustrated in (290). In this use, *tìr* expresses a direct act of refusal or complete abstinence.

(290) *Bà* *lī* *làg* *túɔ́k-kú* *àyén* *wà* *jō* *lá,*
CL.2 SUB open.PFV door.7-DEF.7 PURP CL.1 enter CDM
wà *wìēn* *wá* ***tìr.***
CL.1 say.PFV CL.1 never:IDEO
'When they opened the door for him to enter, he said, "Never"'

The demonstrative identifier *ǹnā* is often employed when the speaker intends to demonstrate a situation or state being described. In such contexts, the speaker asks the listener to watch the situation or state as the speaker acts it out. Prior to saying *dùtìbì* (291), my consultant (narrator) brought together his arms as if to form the shape of a cross, and then let them off swiftly to signal 'null'.

(291) *Bá-lá* *míéná* *kpì=í* ***ǹnā*** ***dùtìbì.***
CL.2-DIST all died.PFV=FOC PROX.PRSTV completely:IDEO
'All those (people) died completely.'

香港大學圖書館 HKU Libraries

4.9 Interjections and other minimal utterances

Interjections are minimal utterances that typically stand-alone to perform emotive, interactional, and interpersonal functions (Dingemanse 2023). Buli interjections show distinct formal features compared to the categories discussed in previous sections; some of them have sounds (like clicks) that neither exist in the phonemic inventory of Buli or have been reported in the standard phonemic inventories of other Gur languages. Some interjections can be modified prosodically for various discursive purposes. Interjections are typically used alone, although they can also attach loosely to various utterances that they introduce or which explain the meaning of the interjection.

Table 32 is a list of some interjections and their approximate meanings. Most likely, the interjection *nyīī* is related to the verb *nyā* 'see'. The interjection *sééjè* 'bastard', *chàmá* 'clear off', *dándúrúwá* 'son of a bitch' and *dáníámá ~ náníámá* 'serves you right' are unsegmentable complex nominals of Hausa etymology. Depending on the number of times it is uttered, the back-released uvular click *ɣ* has different meanings; once affirms or agrees, twice denies or refuses, and several call chickens/roosters. The bilabial click is repeated several times to call cats or dogs.

香港大學圖書館 HKU Libraries

Table 32: Interjections

Interjection	Translation
kái	That cannot be!
ái	It's a struggle!
á!	Why that!
àhɑ́ɑ́	I get it!
àhɑ́ɑ̀ ~ m̀hḿm̀	Better!
gègè	Enough!
má	Whatever!
nyīī (>nyā 'see')	Imagine!
sééjè	bastard
óó	Is that so?, really?
óò	That's unfortunate! Too bad!
òyó ~wàyó	Sorry!
tɔ̀ɔ̀	Right!
wúì	Ouch!
sàbàábù	God of mercy!
wóí	Oh God!
wáásòì ~yáásòì	Oh God!
chàmá	Clear off! Give me a break!
dándúrúwá	Son of a bitch!
dáníámá ~náníámá	Serves you right!
ɣ	Yes!
ɣ_ɣ	No!
ɣ _ɣ _ ɣ _ ɣ ...	Come around (directive to chickens/roosters)
Ɵ_ Ɵ_ Ɵ_ Ɵ...	Come around (directive to dogs and cats)
hàī	Clear off! (directive to goats/sheep)
yáúú	Well done! Keep it up!
kàbàlíkàlà	Goodness!
àlàbàríkà	Unacceptable (price)!

香港大學圖書館 HKU Libraries

The corpus contains other complex morphological forms, some of which are presently fossilized. Conspicuous ones are forms derived by combining verbs and the distal demonstrative (*ǹlá* < *nī* 'FOC' + *lá* 'DIST'). Such forms are used to instruct a person to remain in a certain position, as exemplified in (292)-(295).

(292) *Kà-ǹlá* (*kālī* 'sit' + *ǹlá* 'DIST') 'remain seated'

(293) *Zà-ǹlá* (*zā* 'stand' + *ǹlá* 'DIST') 'remain standing'

(294) *Sì-ǹlá* (?*sīkī* 'be.quiet:IDEO' + *ǹlá* 'DIST') 'remain quiet'

(295) *Tà-ǹlá* (*kālī* 'sit' + *ǹlá* 'DIST') 'hold unto (it)'

Using an analogy with constructions like *Kú ǹlá* ('That is it'), the constructions in (292)-(295), can be translated as 'Sit! That's it!', 'Stand! That's it!', 'Keep quiet! That's it!', and 'Hold unto (it)! That's it!'.

Similar morphological elements have specialised routine uses, serving as social conventions or customary expressions (296).

(296) *tārā* (lit.: 'hold firmly') Bless you! (when someone sneezes)

tìà (lit.: 'greeting') Hello!

chìèná (lit: 'get.coming') Welcome!

ǹ-jáàn (lit.: 'I come') Thank you! (acceptance to 'welcome')

gááfárá 'Sorry, excuse me!'

香港大學圖書館 HKU Libraries

Finally, the verbs *gōōrī* 'stop crying' and *mūm* 'shut up' are normally employed as independent utterances to instruct an addressee to stop crying or cease speaking, respectively (297).

(297) *gōōrī* 'stop crying'
mūm 'shut up'

4.10 Emphatic marker *=mā*

The element *=mā* functions as a predicate emphatic marker, usually occurring at the end of a sentence to emphasise the event or situation expressed by the verb. Since this situation or event is focal, *=má* often follows *ká* 'FOC' to which it is cliticised.

(298)

Tì	*gù*	*nú-(ba)*	*kpì-è-má*	*ká=**mā**.*
1PL	bury.PFV	person-2	dead-4-DEF.2	FOC=PRED.EMPH

'We BURIED the corpses.'

This emphatic usage of *=mā* is commonly seen in contexts where a speaker insists on their own view, usually contrary to the view held by the addressee. Mélançon, Coutu & Prost (1974: 383) make a similar observation by describing *kámā* – without separating the focus marker – in the following manner : "*…il ait une valeur d'insistance, d'affirmation plus accusée de la réalité du processus verbal.*"). The extract in (299) illustrates the use of *=mā* to insist on the occurrence of an event, contrary to Speaker A's thoughts.

(299)

A:	*Bábátù*	*àn*	*kpàlím*	*lì*	*Sàvùrúk.*
	NAME	NEG	fight.PFV	with	NAME

'Babatu did not fight with the Savuruk.

B:	*Wà*	*kpàlìm*	*lì*	*Sàvùrúk*	*ká=**mā***
	CL.1	fight.PFV	with	NAME	FOC=PRED.EMPH

'He (Babatu) FOUGHT WITH THE SAVURUK.'

香港大學圖書館 HKU Libraries

The fact that *=mā* emphasises an event makes it possible to omit the object referent to move it closer to the verb. Compare the following sentences:

(300) a. *Mí* *dɛ́* *sàbèn-tà-ŋá* *ká=**mā.***
1SG eat.PFV saben-8-DEF.4 FOC=PRED.EMPH
'I ate the sabenta.'

b. *Mí* *dɛ̀=ɛ́=**mā**.*
1SG eat.PFV=FOC=PRED.EMPH
'I ATE it.'

=mā is often not used in negative interrogative constructions, but in rhetorical questions such as Speaker B's response in (301).

(301) A: *(...)* *àtì* *Bábátù* *yāā* *bàsì* *kpālīŋ-ká* *a?*
CONN NAME then cease.PFV battle.5-DEF.5 SP
'…then Babatu ceased the battle, right?

B: *Wà* *tómpéém-á-ŋá* *míéná* *àn* *nùé*
CL.1 arrow-4-DEF.2 all NEG.PFV finish
*ká=**mā*** *lá?*
FOC=PRED.EMPH CDM
'Had all his arrows not been used up?'
(i.e. He stopped because all his arrows had been used up.)'

香港大學圖書館 HKU Libraries

4.11 *lá*

Lá performs three determination functions, namely distal demonstrative (302), presentative demonstrative (303), and clausal demonstrative (304).

(302) *Bíík* *ká-**lá***…
child.5 CL.5-DIST
'That child…'

(303) *kpɔ́ŋ* *lī* ***lá***…
guinea.fowl FOC DIST.PRSTV
'That is a guinea fowl.'

(304) a. *Tɔ̄m* *bú-í* *lī* *kpèglì* ***lá***…
battle.9 CL.9-REL SUB be.last CDM
'The last battle that…'

b. *Bà* *lī* *pàà* *Támálè* ***lá***…
CL.2 SUB reach.PFV PLACE CDM
'When they arrived in Tamale…'

4.12 *lī ~ nī*

Lī or *nī* functions as a general subordinator (305) and a focus marker (306). A detailed discussion on this marker is presented in Chapters 7, 10, and 11.

(305) *Wɔ̄g-tā-ŋá* *lī* *vààsì* *lá, …*
sabdariffa-8-DEF.4 SUB boil.PFV CDM
'Once the sabdariffa has boiled, …'

(306) *Tììm* ***lī*** *bò=ró.*
medicine.9 FOC be.located=there
MEDICINE is available.'

香港大學圖書館 HKU Libraries

4.13 *ká* and *dāā*

Ká functions as a focus marker, as illustrated in (307). A detailed discussion on ká and daa can be found in Chapters 7, 10, and 11.

(307) a. *Bà* *kàlì* ***ká*** *tùìk-ká* *zúk.*
CL.2 sit FOC baobab.7-DEF.7 top
'They are sitting on THE BAOBAB.'

b. ***Ká*** *búnɔ́rúk*
FOC chameleon.7
'It is a CHAMELEON.'

c. ***Ká*** *[bíík* *lī* *sààlì* *lò* *bèlì* *kpìéŋ* *pō]*, …
FOC child.5 FOC slip.PFV fall river.3 big.5 in
'A BOY SLIPPED AND FELL IN A BIG RIVER, ...'

Dāā is the opposite of *ká*, used to mark negative focus, as illustrated in (308).

(308) a. ***Dāā*** *līīrūk*
NEG.FOC turtle.7
'It is not a turtle.'

b. *Bábátù* *dāā* *núrí.*
NAME NEG.FOC person.1
'Babatu is not HUMAN.'

香港大學圖書館 HKU Libraries

4.14 **Coordinators**

The coordinators *àlì, àtì, à, (à)līgè, (à)bī, yāā, yàā(sī), kóó and àmāā* link various syntactic elements in the corpus. *Kóó* and *àmāā* are Hausa loans quite widespread among Niger-Congo languages (found also in Kusaal, cf. Abubakari 2018; and Kam, cf. Lesage 2020). Table 33 lists the common functions of these coordinators along with the elements they typically connect. Sometimes, a few members of one of the linked elements are omitted. Following the table are constructions illustrating the use of each of the coordinators. Chapter 10 covers the functions of these coordinators in detail.

Table 33: Coordinators

Coordinator	Elements	Notes
(a)lì	(pro-)nouns	conjunctive
		comitative, instrument
	verbs, clauses	simultaneity
(à)tì	clauses	resultative, reason, complementiser
à	verbs, clauses	Sequential
(à)līgè	verbs, clauses	conjunctive
		anteriority
(à)bī	verbs, clauses	Anteriority
yāā	verbs, clauses	posteriority
yàā(sī)	(pro-)nouns, verbs, clauses	Alternative
kóó	(pro-)nouns, verbs, clauses	Alternative
àmāā	verbs, clauses	Alternative
à(sī)	(pro-)nouns, verbs, clauses	similative, purposive
sēkā	clauses	apprehensive

香港大學圖書館 HKU Libraries

The following sentences illustrate the use of these coordinators:

(309) *Àkàláà,* *Kùmásí,* *Támàlè,* ***àlì*** *Bɔ́lígá.*
PLACE PLACE PLACE and PLACE

'Accra, Kumasi, Tamale, and Bolga.'

(310) *(...)* *bàsì* ***àtì*** *kù* *kààsì*
leave.PFV CONN CL.7 spoil.PFV

'… left it and it spoilt.'

(311) *(...)* ***àtì*** *bà* *bá-í* *kùm* ***à*** *nàm.*
CONN CL.2 CL.2-REL cry.PFV SC struggle.PFV
à *kpì.*
SC die.PFV

'… and some of them cried, struggled and died.'

(312) *Nídɔ́-wá* *à* *wū=ū=mā* ***àlīgè***
man.1-DEF.1 IPFV call= FOC=PRED.EMPH but
àdànlíé-wá *kàn* *tūrīsī.*
NAME.1-DEF.1 NEG.IPFV respond
'The man calls, but the Adanlie does not respond.'

(313) *Tì* *lì* *jāārī* ***àbī*** *tì* *lāg.*
1PL FUT fix then 1PL open

'We will fix it then open it.'

香港大學圖書館 HKU Libraries

(314) *Bà* *kààsì* *tɛ̀ŋ* *kà-lá* ***yāā*** *jàm* *Bùlùk.*
CL.2 destroy.PFV land.5 CL.5-DIST then come.PFV PLACE

'They destroyed that land, then came to Buluk.'

(315) *Jínlā* ***yàā*** *chum.*
today or tomorrow

'Today or tomorrow'

(316) *(...)* *fì* *lɔ̄nsī* *yé-sá* ***kóó*** *máágì* *bù* *pō*
2SG take salt-6 or NAME CL.9 in

'… you drop salt or maggi into it (the soup).'

(317) *Bà* *sààlìm* *ká=mā* ***àmāā*** *wà* *zèrì.*
CL.2 plead.PFV FOC=PRED.EMPH but CL.1 refuse.PFV

'They pleaded, but he refused.'

(318) *Kù* *à* *nyɛ̄* ***sī*** *bà* *kàn* *gɔ̄ā* *lá.*
CL.7 IPFV do as.if CL.2 NEG.IPFV sleep CDM

'It is as if they do not sleep.'

(319) *Bù* *dàn* *tàgrì* *nú-(ba)* *bɔ̄rī* ***sēkā***
CL.9 if attack person-2 many unless
tì *līg* *bān-ní.*
1PL close border.3-DEF.3

'If it attacks many people, we must close the border.

香港大學圖書館 HKU Libraries

5 Verbs

5.1 Introduction

Verbs differ from nouns in form and function. A restricted number of consonants occur as either the final or penultimate segment, followed mostly by the vowels *-i* or *-a*. The high vowel has an epenthetic character and occurs optionally in many contexts. Tonal morphology in verbs is rather complex, with only M tone occurring in cited or default verbs. Tonal changes occur in different morpho-syntactic contexts to mark grammatical functions. Verbs co-occur with a range of elements, such as tense, aspectual, mood and negation auxiliaries to instantiate distinctive states, processes, and activities. Verb sequences, which form serial verbs and other multi-verb constructions, also serve crucial grammatical and grammatic and lexical functions. Verbs are also productive lexemes for deriving deverbal nouns and other nominal categories.

This chapter focuses on aspects of verb morphology. Section 5.2 discusses the two broad classes of verbs: *dynamic* and *stative*. Section 5.3 examines verb extensions. Section 5.4 addresses the tonal morphology of verbs. Section 5.5 presents exceptional cases related to the morphology of three pairs of verbs: *chièn* versus *jām* (§ 5.5.1), *chɛ̄ŋ* versus *gā* (§ 5.5.2), and *bō* versus *kā* (§ 5.5.3). Section 5.6 provides brief notes on verb repetition.

香港大學圖書館 HKU Libraries

5.2 Dynamic versus Stative verbs

A vast majority of verbs are dynamic verbs which code actions or processes that involve movement, change, or activity. Dynamic verbs have the suffix *-i*. By contrast, stative verbs denote states and conditions whose starting and end points cannot be observed. Stative verbs have the suffix *-a*. A few examples of verbs in the dataset are quantifiers (e.g. *pīīsī* 'be many', *zūāgī* 'be big', *pɔ̄sīm* 'become small', *pɔ̄sīmā* 'be small', *pīīsī* 'be many', etc.). Verbal quantifiers are typically stative. Table 34 lists some verbs that have dynamic and stative uses.

Table 34: Dynamic and stative verbs

Dynamic	Stative	Gloss
kālī	*kālā*	'to sit'
mɔ̄tī	*mɔ̄tā*	'to near, to be near'
sēbī	*sēbā*	'to know, to come to know'
bāgī	*bāgā*	'to be able'
pīēlī	*pīēlā*	'to whiten, to be white'
sāālī	*sāālā*	'to become slimy, to be slimy'
mūnī	*mɔ̄nā*	'to become red, to be red'

Verbs in the first column can describe situations that involve movement (320) or change of state (321).

(320) *Bà* *lī* *mɔ̀tì* *yé-(ri)-ní* *lá…*
CL.2 SUB near.PFV house-3-DEF.3 CDM
'When they neared the house, ...'

(321) *Fì* *à* *dām* *ká=mā,* *àtì* *bù* *sāālī*
2SG IPFV stir FOC=PRED.EMPH CONN CL.9 become.slimy
'You stir it so it becomes slimy.'

香港大學圖書館 HKU Libraries

When the endpoints of the situations described in (320) and (321) are reached, they can be expressed as (322) and (323) respectively:

(322) *Bà* *mɔ̀tì* *yé-(ri)-ní* *yá*
CL.2 be.near house-3-DEF.3 PRF
'They have neared the house.'

(323) *Bù* *sààlì* *yá.*
CL.9 become.slimy PRF
'It has become slimy.'

The following are examples of constructions used to indicate that a state has been 'entered'. The verb *sēbī* in (324) denotes 'entry into a state of knowing', 'to get to know' or 'to become cognisant of.' Similarly, *mūnī* in (325) instantiates 'entry into a state of redness'.

(324) *Nì* *yàà* *sèbí* *tūēm-mú* *wíé.*
2SG now know disease.9-DEF.9 issue.4
You now know about the disease.'

(325) *(...)* *àtì* *Bùlìsà* *mɛ̄* *nàmbí-é* *mùnì.*
CONN NAME.6 also eye-4 become.red
'(…) and Bulisa also became angry.' (lit.: eyes turned red)

Stative verbs typically describe static conditions or states (326)-(327). Some of them can describe the end point of a situation.

香港大學圖書館 HKU Libraries

(326) *Bù* *sāālā.*
CL.9 be.slimy
'It is slimy.'

(327) *(...)* *àtì* *bà* *gà* *kālā.*
CONN CL.2 go.PFV be.seated
'(…) and they went and were sitting.'

The segmental morphology of verbs puts them into two classes, dynamic and stative (cf. Mélançon, Coutu & Prost 1974; Schwarz 2005; Akanlig-Pare 2005). This division is not rigid because, as Schwarz (2005: 219–220) notes, the status of the low vowel is unclear in some cases ("*Verben ohne C2 sind selten in dieser Gruppe und der Status ihres Vokals unklar*"). Besides, some verbs describe semantically ambivalent situations. Further, borderline cases like (328) suggests that *-a* in some cases developed as an utterance final particle (just as in the case of the words *ŋmānī* versus *ŋmànà*, *dērī* versus *dèrà*, *sūm* versus *sùmà*).

(328) *Sēb-**ā*** 'be careful'
*Kāl-**ā*** 'keep sitting' (be seated)
*Chièn-**ā*** 'welcome' (lit.: keep coming)
*Tār-**ā*** 'hold unto'

Syntactic elements rarely occur after verbs that end with *-a* in these constructions, and *-a* seems to mark finality or a terminal point of a situation. Considering that *yá* frequently occurs after verbs that end with *-i*, and the fact that *yá* rarely follows *-a* ending verbs, it is possible that verbs in the second column of Table 34 derive etymologically from their counterparts in the first column (in the way illustrated in (329) and (330)).

香港大學圖書館 HKU Libraries

(329) *Nú-(ba)-má* *kàlì* *yá.*
person-2-DEF.2 sit.PFV PRF
'The people have sat.'

(330) *Nú-(ba)-má* *kàlà.*
person-2-DEF.2 be.seated
'The people are seated.'

Verbs that denote dynamic situations normally express actions and/or processes, whereas verbs that denote stative situations typically express unchanging states. Dynamic verbs constitute the largest group. Verbs that denote unchanging states typically indicate the existential situation of certain entities, ascribe qualities to such entities, or describe the position/location of such entities. Verbs that denote unchanging states may also indicate perception and/or cognitive abilities. Table 35 lists some of these verbs and their semantic classes.

Table 35: Semantic classes of verbs

Semantic class	Verbs	Gloss
Property	*tɔ̄ā*	'to be bitter'
	wɔ̄bsā	'to be sweet'
	pāgrā	'to be weak'
	nālā	'to be hard'
		'to be beautiful'
Perception and Cognition	*sēbī*	'to know'
	zē	'to not know'
Existence	*bō*	'to be at, exist'
	kā	'not be at, not exist'
	vɔ̄ā	'to be alive'
Position	*zā*	'to be in a standing position'
	dɔ̄ā	'to be in a lying position'
	kālā	'to be seated'
	mɔ̄tā	'to be near'

香港大學圖書館 HKU Libraries

Verbs that convey dynamic or stative readings convey core lexical meanings, but some verbs have extended uses in certain contexts where they function as grammatical tense, aspect, and mood markers. Some of the adverbial modifiers discussed in Chapter 4 are 'verby' in their morpho-syntactic characteristics. For example, the verbs *tūāgī* 'move toward', *chīēn* 'come', and *pāārī* 'reach' are sometimes used in periphrastic constructions, including serial verb constructions, to instantiate various grammatical functions.

The verbs *bāgī* 'be able' and *zā* 'to stand' have abilitive and predictive modal uses respectively. Similarly, *chīēn* 'to come' is used to express an intention to perform an activity, whereas its suppletive *jām* 'to come' is used as a Cancelled past tense marker. *Tā* 'to grasp/hold' is used to express possession, while the locative verb *bō* is commonly used to express Progressive aspect. *Wìēn/àyén* 'say' is used as a purposive marker, *tɛ̄* 'give' is used as subjunctive 'let', as a causative marker, and as a complementiser. *Nyɛ̄* 'give' serves as a light verb used together with other verbs to express causative meanings and to issue commands. Similarly, *nyā* 'watch/see' is used with the similative *sī* to indicate a speaker's uncertainty, and with other verbs to express first-time experiences and to express a command, request, or desire for someone to ensure that an action takes place. The verb *pā* 'take' is the core element in instrumental 'take'-serial verb constructions. All these have been discussed in sections and chapters where they best fit.

a) Verbal Quantifiers

Verbal quantifiers indicate the amount or number of entities. Examples (331) - (252) illustrate the use of z*ūāgī* 'be big', *pɔ̄sīmā* 'be small', and *pīīsī* 'be many'.

(331)	*Bà*	*jàm*	*gùm*	*chāāb*	*tì*	*bà*	*yāā*	*zùàgì.*
	CL.2	come.PFV	join	each.other	and	CL.2	then	be.large

'They came together, for them to grow large.'

香港大學圖書館 HKU Libraries

(332) *Yé-sá-ŋá* *pɔ̄sīmā* *ká=mā,*
salt-6-DEF.4 be.small FOC=PRED.EMPH
sē *m̀* *pā* *màgà* *pìn* *dú.*
unless 1SG take little add there
'The salt is little; I must put a little more into it (the soup).'

(333) *Kù* *yègà* *bò* *sìnsíí* *tì* *nú-(ba)-má* *pììsì.*
CL.7 a.lot be.at where and person-2-DEF.2 be.many
'A lot of it [COVID cases] is in (places) where people are crowded.'

Another verbal quantifier is the phrase *àn sɔ̄ā díí* 'be little' (*àn* 'NEG', *sɔ̄ā* 'be.like', *díí* 'nothing') which indicates that an entity is too little, insufficient, or minimal (334).

(334) *Kàmántòsùk-kú* ***àn*** ***sɔ̄ā*** ***díí***
tomato.7-DEF.7 NEG be.like threshold
'The tomato is woefully insufficient.'

香港大學圖書館 HKU Libraries

5.3 Verb extensions

Verb extensions attach to verb roots. Previous studies (see Mélançon, Coutu & Prost 1974; Kröger 1992; Schwarz 2005) also recognise the semantic relations between verbs but provide a few isolated cases (see Table 36).

Table 36: Verbs extensions in previous studies

		Mélançon, Coutu & Prost (1974)	Kröger (1992)
lɔ̄ 'to fall'	*lɔ̄nsī* 'to drop'	verbe factitif	causative
nām 'to suffer'	*nāmsī* 'to suffer sb.'	verbe factitif	causative
dōm 'to pain'	*dōmsī* 'to hurt'	verbe factitif	
kpī 'to die'	*kpīmsī* 'to quench'	verbe factitif	
lū 'to pierce'	*lūsī* 'to plunge into'	verbe factitive	
sā 'to rub'	*sālīsī* 'to smoothen'		causative
yālī 'to marry'	*yālīsī* 'to marry sb. to'		causative
dārī 'to pull'	*dāāsī* 'to push'	verbe opposé	itive-ventive
gū 'to bury'	*gūtī* 'to dig out'	verbe opposé	itive-ventive
līgī 'to cover/close'	*lāgī* 'to open'		reversive-motive
bānī 'to accompany'	*bāsī* 'to leave behind'		reversive-motive

Buli does not show a principled or systematic means of achieving the alternation in Table 36. Some of the verbs are falling out of use and have been replaced by SVCs. For example, there is a high preference for *yālī tɛ̀* {marry give} 'marry to/for' to *yālīsī* which expresses the same meaning. The alternation probably suggests a historical simplification of morphologically complex words which caused verbs to lose their extensions.

A more complex issue relates to which segments have a derivational function and which form part of a verb root. The verbs *nāmsī* 'to make suffer', *dōmsī* 'to hurt', and *yālīsī* 'to give to marriage' are related in form and meaning with their counterparts in the first column. Their semantic relation is transparent and points to a derivational process by means of *-si*. A similar

香港大學圖書館 HKU Libraries

relation exists between *gū* ‘to bury’ and *gūtī* ‘to dig out’ where *-ti* appears to perform a derivational function. Verbs like *lɔ̄* ‘to fall’ versus *lɔ̄nsī* ‘to drop’, *dārī* ‘to pull’ versus *dāāsī* ‘to push’, and *bānī* ‘to accompany’ versus *bāsī* ‘to leave behind’, and *kpī* ‘to die’ versus *kpīmsī* ‘to quench (fire) show meaning relations. Nonetheless, the relation is unclear in many cases and suggests a possible coincidence. For example, *sā* ‘to rub’ versus *sālīsī* ‘to shine’. The function of *-li* in *sālīsī* is unclear, and **sālī* is not a recognised expression.

As will be shown further in Section 5.3.1 and Section 5.3.2, verb extensions are not productive in Buli presently. They do not instantiate grammatical or semantic features in a systematic way. It is possible that these extensions are remnants of a once productive system while others have been inherited through sporadic borrowing. Several other Gur languages have similar unproductive extensions, but Musah (2018: 154–157) suggests contrarily that Kusaal has productive verb extensions. Ditammari and Nateni have also been shown to have well-defined and productive verbal extensions, whereas Kɔnni has partial productive verb extensions that are on a decline (Reineke 1995; Neukom 1995; see Schwarz 2005: 16). In Dagaare, verb extensions widely considered to be aspectual markers are recently being reanalysed (see, for example, Angsongna 2023 for a view on what is often considered to be perfective verb forms in Dagaare studies). Detailed investigations into the morphology and lexical semantics of verbs are a desideratum on a language-by-language basis and in Gur typological and/or comparative studies.

香港大學圖書館 HKU Libraries

5.3.1 Observations about verbal extensions

Table 37 is a list of verb extensions in my corpus. Examples of verbs and other categories related to these verb extensions have been provided in the second and the third columns of the table.

Table 37: Verb extensions in this study

Extension	Examples	Related words
-si	*tūsī* 'to push'	*tū* 'to dig'
	lɔ̄nsī 'to drop'	*lɔ̄ 'to fall'*
	wūsī 'to bark'	*wū* 'to call'
	bīlīsī 'to make into ball'	*bīlī* 'to wipe', *bīlīm* 'roll'
	dūŋsī 'to limp'	*dūnā* 'kneel'
	nyūmsī (tr.) 'to smell'	*nyūm* 'to smell' (intr.), *nyúm* 'smell' (noun)
	nyīmsī 'bite a piece off'	*nyīīn* 'tiny piece, *nyīn* 'tooth'
	vūūsī 'to breathe'	*vūūgī* 'to have life', *vūm* 'life'
-ri	*kābrī* 'break'	*kābīk* 'half, part'
	chērī 'to wipe off'	*chē* 'to cut'
	fīērī 'to blow (nose)'	*fīēsī* 'to sweep off liquid', *vīēsī* 'scoop out'
	yīrī 'to rise/get up'	*yītī* 'to rise, to fly away'
-ti	*gūtī* 'dig out'	*gū* 'to bury'
	kpītī 'uproot'	*?kpī* 'to die'
	tīēntī 'to straighten'	*?tīērī* 'to remind/remember'
	pīēntī 'to brighten'	*pīēlī* 'to whiten'
	dūēntī 'to decant'	*dūērī* 'to remove nail',
-li	*jūēlī* 'to climb'	
	yālī 'to marry'	*yālīsī* 'to marry'
	yāālī 'to like, to find'	
	fūūlī 'to blow air (with the mouth)'	*fūūsī* 'to bloat', *fūūgī* 'to fan'

香港大學圖書館 HKU Libraries

-ni	*bānī* ‘to accompany’	*bāntī* ‘to say goodbye’, *bāsī* ‘to leave’
	dūēnī ‘to put down’	*dūāgī* ‘to lie down’
	bɔ̄nī ‘to break into pieces’	*bɔ̄n* ‘tiny morsel’
	dīīnī ‘to play’	
-sa	*līmsā* ‘be deep’	*līmsī* ‘be wait’
	fāāsā ‘be light’	
	bāāsā ‘be soft’	
	yɔ̄gsā ‘be wet, be afraid’	*yɔ̄gī* ‘to cool down/be wet’, *yɔ̀gsìm* ‘shade’
-gi	*lāgī* ‘to open’	*lātī* ‘to remove (sp.)
	līgī ‘to close’	*lītī* ‘to unbutton’
	yɔ̄gī ‘to cool down/be wet’	*yɔ̄gsā* ‘be wet, be afraid’, *yɔ̀gsìm* ‘shade’
	fūūgī ‘to fan’	*fūūlī* ‘to blow air with mouth’
	vūūgī ‘to have life’	*vūūsī* ‘to breathe’, *vūm* ‘life’

As shown in the table some verbs having identical roots but different extensions can express various semantic relations. For example, an antonymic relation holds between *lāgī* ‘open’ versus *līgī* ‘to close’, and a synonymic relation holds between *lātī* ‘to peel off’ versus *lītī* ‘to unbutton’. In some cases (e.g. *bānī* ‘to accompany’ versus *bāsī* ‘to leave behind’) vowel change derives the semantic relation.

Many verbs bearing *-si* express meanings related to direct emission of sound or various activities and qualities that are typically accompanied by sounds (e.g. *ŋusi* ‘to push out baby’, *dōmsī* ‘to squat’, *pūsī* ‘to burst’, *dūŋsī* ‘to squat’). Some assumptions can be made for some verbs. I assume that *lɔ̄nsī* ‘to drop’ derives etymologically from *lɔ̄* ‘to fall’. Similarly, *wūsī* ‘bark’ seems to derive etymologically from *wū* ‘to call’; *wūsī* and *wū* are related to *wōm* ‘to hear/listen’.

In a few cases, the extensions seem to derive verbs from nouns. For example, *nyūmsī* probably derives from *nyūm* which can be used as a noun or verb. Similarly, *dūŋsī* ‘limp’ and *dōmsī* ‘to squat’ might have developed from *dūŋ* ‘knee’. The relation between verbs and other categories is also seen in word pairs like *kābīk* ‘half, part’ versus *kābrī/kābsī* ‘to break portion’,

香港大學圖書館 HKU Libraries

nyīmsī versus *nyīīn* 'tiny piece versus *nyīn* 'tooth', *bɔ̄n* 'tiny morsel' versus *bɔ̄nī* 'break into tiny morsel', *vūūsī* 'breathe' versus *vūm* 'life'. The relation between the meanings expressed by words like *yɔ̄gsā* 'be wet, be afraid' versus *yɔ̄gī* 'to cool down/be wet', versus *yɔ̀gsìm* 'shade' is also noteworthy. The verbs *līmsī* 'to wait' versus *līmsā* 'deep' are somewhat related and evoke a sense of 'extension'; *līmsī* 'to wait' implies an extension of time, whereas *līmsā* implies an extension or depth in a physical or metaphorical sense. The meaning correlations of verbs and other categories suggest that they have a common origin.

Verb extensions in some verbs (e.g. *vūūgī* 'to have life' versus *vūūsī* 'to breathe' and *fūgī* 'to blow air (fan), and *fūūsī* 'to bloat'), shade their semantics to specify the manner in which certain actions are performed. If we consider *vūūgī* 'to have life', *vūūsī* 'to breathe, *fūgī* 'to blow air (fan)', and *fūūsī* 'to bloat' they have similar sounds and meanings (with air and space being their common denominator). Other words related to these four words are *vɔ́rúb* 'hole' *vūm* 'life', *vūrī* 'to pierce', *fūūrī* 'bean cake'. Verbs like *lāgī* 'to open (e.g. door)' versus *līgī* 'to close' are antonymic due to internal vowel change, and *lātī* 'to remove (e.g. banana peel)' versus *līīī* ' to open' (e.g. dress button) are synonymic due to internal vowel change. Similarly, *lāgī* 'open', *lātī* 'open', and *līīī* 'open' are synonyms.

To conclude, verb extensions cannot be systematically attached to verbs to derive particular grammatical or lexical functions. Instead, they have high functional load, by contributing to verbal derivation and interacting with a range of verb roots to achieve shades of manner-adverbial meanings. With this, the Buli verb system achieves phonemic economy by using a limited set of sounds to convey and differentiate a wide variety of verbs with distinct meanings.

香港大學圖書館 HKU Libraries

5.3.2 Economy of extensions

At a glance, it would seem the extensions indicate dedicated functional oppositions such as, causativity, transitivity, and reversitivity. However, there are relevant deviations and gaps showing that a form-function mapping paradigm cannot be sufficiently established for the extensions. The extensions interact with various verb roots to optimise the functional load of these roots. Following are some preliminary observations.

The suffix *-si* behaves like an active voice suffix in *nyūm* versus *nyūmsī. Nyūm* is used to put focus on the smelling character of entities (335), whereas *nyūmsī* is always used to put focus on the action of smelling performed by a subject (336).

(335) *Kù* *à* *nyūm* *ká=mā.*
CL.7 IPFV smell FOC=PRED.EMPH
'It smells.'

(336) *Nì* *nyūmsī* *jɔ́ŋ-kú* *nyà.*
CL.7 smell dawadawa.7-DEF.7 see
'(You) smell the *jɔ̄ŋ* to see.'

On the contrary, the relation between *kpī* versus *kpīmsī* is not an issue of active–passive voice. *Kpī* refers to the act of ceasing to live or exist. This act typically applies to humans and other animate entities, with a possible extension to inanimate entities like fire. *Kpīmsī* refers to the act of taking the life of fire (i.e., douse, extinguish); but the act of taking the life of a human or an animate entity is *kō* 'kill'. Note that *kpī* 'die', *kpīmsī* 'extinguish', and *kō* 'kill' are related in meaning (and the fact that they each begin with a velar consonant is interesting).

香港大學圖書館 HKU Libraries

(337) *Fì* *yàà* *kpīmsī* *bòlìm-mú.*
2SG then extinguish fire.9-DEF.9

'Then you quench the fire.'

(338) *Tūēm-mú* *kò* *nù-bá* *yègà.*
disease.9-DEF.9 kill.PFV person-2 a.lot

'The disease killed a lot of people.'

(339) *(...)* *àtì* *bá-lá* *míénā* *kpì* *ǹnā*
CONN CL.2-DIST all die.PFV PROX.PRSTV
férr.
entirely:IDEO

'(…) and all those (people) died entirely.'

香港大學圖書館 HKU Libraries

5.4 Tonal morphology

Buli verbs lack lexical tone contrast. Verbs have Mid tone in citation, as toneless extensions copy the M tone of verb roots to which they are attached. These findings pretty much confirm general findings about the tonal morphology of Buli verbs. Beyond this are inconsistent findings about the variations in the surface tonal structure of verbs in syntactic contexts.

In a basic SVO clause, the tone of a verb changes according to the tone of pronominal subjects and objects. Proposals have been made for grammatical agreement tones for these syntactic elements. However, more complications are often encountered when we consider tonal changes in verbs with different syllable structures. Moreover, the rampant occurrence of various elements with verbs implies a need for a more general means of deriving tonal roles rather than accounting for isolated cases. To effectively achieve this, post-lexical factors, which shape the overall patterns of tone in utterance will have to be considered. Kröger (1992: 9) already hints at this by observing that "The syllable-inherent tone may be changed by the intonation of a syntactic structure[24]." This agenda, though worth pursuing, is beyond the scope of this thesis. The simple sentences in (340)-(348) illustrate different tonal structures of verbs in different grammatical functions, followed by some general observations.

香港大學圖書館 HKU Libraries

[24] It is sometimes assumed that intonation is less relevant in tonal languages. Aside from Buli, this does not seem to apply to other Gur languages.

Imperfective

(340) *Àdēm* *à* ***nāg*** *gɔ̀ŋ.*
NAME IPFV beat drum.7

'Adem beats a drum.'

(341) *Àdēm* *kàn* ***nāg*** *gɔ̀ŋ.*
NAME NEG.IPFV beat drum.7

'Adem does not beat a drum.'

Perfective

(342) *Àdēm* ***nàg*** *gɔ̀ŋ.*
NAME beat.PFV drum.7

'Adem beat a drum.'

(343) *Àdēm* *àn* ***nàg*** *gɔ̀ŋ.*
NAME NEG.PFV beat drum.7

'Adem did not beat a drum.'

Future

(344) *Àdēm* *lì* ***nāg*** *gɔ̀ŋ.*
NAME FUT beat drum.7

'Adem will beat a drum.'

(345) *Àdēm* *kàn* ***nāg*** *gɔ̀ŋ.*
NAME NEG.FUT beat drum.7

'Adem will not beat a drum.'

香港大學圖書館 HKU Libraries

Imperative

(346) ***Nāg*** *gɔ̀ŋ.*
beat drum.7
'Beat a drum.'

(347) ***Á*** ***nāg*** *gɔ̀ŋ.*
IPFV beat drum.7
'Keep beating a drum.'

(348) *Kán* *á* ***nāg*** *gɔ̀ŋ* [kạ́: nāg gɔ̀ŋ]
NEG.IMP IPFV beat drum.7
'Do not keep beating a drum.'

These sentences exemplify tonal changes that the verb exhibits in marking grammatical functions. M tone is realised on monosyllabic verbs when it co-occurs with *à* to mark Imperfective and with *lì* to mark Future. In contrast, Low tone is recurrent on the verb (with no additional morpheme) to mark Perfective aspect. In the Imperative, a verb bears a M to. Prototypical stative verbs mostly bear Mid tone, with no additional morphemes occurring with them to perform grammatical functions. The alternation between M tone and L tone, with or without additional morphemes, is recurrently used to express a range of grammatical notions. More details on this have been presented in Chapter 7.

香港大學圖書館 HKU Libraries

5.5 Exceptional cases

5.5.1 *chièn* versus *jām*

Chièn 'coming' is inherently progressive and is usually used together with any tense or aspectual particle. *Chièn* can, however, be negated with *àn*. The following sentences illustrate the use of *chièn.*

(349) *Félí-sà-ŋá* *chièn* *Bùlùk.*
whiteman-6-DEF.4 coming PLACE
'The whitemen are coming to Buluk.'

(350) *Ànààb* *àn* *chièn* *kūū-(b)-mú.*
NAME NEG coming funeral-9-DEF.9
'Anaab is not coming to the funeral.'

Since *chièn* 'coming' cannot be used with tense and aspectual markers, *jām* serves as a suppletive counterpart. For instance, to express the future of *chièn* 'coming', *jām* is used with the future tense marker *lì*. Compare the following:

(351) *Ànīāk* *chièn* *a.*
NAME coming SP
'Aniak is coming.'

(352) *Ànīāk* *lì* *jām.*
NAME FUT come
'Aniak will come.'

香港大學圖書館 HKU Libraries

5.5.2 *chɛ̄ŋ* versus *gā*

Chɛ̄ŋ and *gā* are somes used interchangeably to express the notion ‘go’. These two verbs can also be used together to express the notion ‘go’, although *gā* functions primarily as a general motion verb.

(353) a. *Bà* *gà* *yè-rí.*
CL.2 go.PFV home-3
‘They went home.’

c. *Bà* *chèŋ* *gà* *yé-rí.*
CL.2 walk.PFV go.PFV home-3
‘They go home.’

5.5.3 *bō* versus *kā*

Bō ‘be.located’ and its negative *kā* ‘not.located’ express location and (non-) existence, as exemplified in ( ). These verbs are rarely compatible with basic tense and aspectual markers.

(354) *Nààwén* *bò* *dú.*
god.3 be.located there
‘There is God.’

(355) *Kɔ́m* *kā* *dú*
hunger.9 be.located there
‘There is no hunger.’

香港大學圖書館 HKU Libraries

5.6 Repetition of verbs

Verb repetition mainly imparts durative, intensive and pluractional meanings to an action. The repetition of *dām* indicates that the action is performed multiple times, while the repetition of *zā* signals a temporal extension of the action (standing).

(356) *Ǹ* *dām* *dām* *tì* *kūkūl-á-ŋá* *yɔ̄tī.*
1SG stir stir and lump-4-DEF.4 dissolve
'I stir multiple times for the lumps to dissolve.'

(357) *Nípō-(ba)-má* *zā* *zā* *à* *kààrì.*
woman-2-DEF.2 stand stand SC scream.PFV
'The women stood for some time and screamed.'

The morphologically complex element *bōró* (*bō* 'be located', *dú* 'there') can be repeated in contexts like (358) and (359) to indicate that an activity occurs seldomly;

(358) *Kù* *dàn* *bō=ró* *bà* *gā*
CL.7 when be.located=there CL.2 go
nàmsì *tɛ̄ŋ-sā.*
trouble land-6
'Occasionally, they would go and trouble the communities.'

(359) *Kù* *dàn* *bō=ró* *bō=ró*
CL.7 when be.located=there be.located=there
wà *dék* *jām.*
CL.1 EMPH come
'Once in a blue moon, he himself comes.'

香港大學圖書館 HKU Libraries

6 Tense, aspect, mood, and negation

A range of elements, such as tone, auxiliaries, temporal nous, adverbials, and serial verb constructions are employed in intricate ways to express tense, aspect, and mood categories. These categories overlap in several ways; identical elements may code more than one category, a single category coded in different ways, and sometimes prosodic variation is used in isolation or together with tense and/or aspectual markers. The goal of this chapter is to describe the constructions that code tense, aspect, and mood categories. Aspect is the most relevant category, with present-time and past-time situations subsumed under imperfective and perfective aspects respectively.

The element *à* functions as a general imperfective marker used with verbs for habitual or ongoing actions, as well as generic statements, without specifying their completion (§ 6.1). By contrast, the perfective aspect is marked by a replacive Low tone on verbs (§ 6.1). Future time is marked with *lì* (§ 6.2). Sections (§ 6.3) and (§ 6.4), respectively, discuss the temporal adverb *pòòm*, and the cancelled past marker *jām*. Section 6.5 covers the progressive aspect. Section 6.6 discusses mood and modality, focusing on the imperative (§ 6.6.1), the means of marking and expressing wishes (§ 6.6.2), while section (6.6.3) discusses modality with three core semantic types, viz., dynamic modality (6.6.3.1), deontic modality (§ 6.6.3.2), and epistemic modality (§ 6.6.3.3) covered. Section 6.7 covers negation as follows: negative imperfective (§ 6.7.1), negative future (§ 6.7.2), negative imperative (§ 6.7.3), negative perfective (§ 6.7.4), negative states (§ 6.7.5), and negative progressive (§ 6.7.6). Section 6.8 describes suppletion in negation marking, involving *ká* versus *dāā* (§ 6.8.1), *bō* versus *kā* (§ 6.8.2), *tā* versus *kā* (§ 6.8.3), and *zā* 'stand' prospective suppletion (§ 6.8.4). Section 6.9 comments on previous analyses of Buli negation markers.

香港大學圖書館 HKU Libraries

6.1 Imperfective and Perfective aspects

The element *à* functions as a general imperfective marker used with verbs for marking ongoing or repeated actions, as well as generic statements, without specifying their completion (§ 6.1). The following examples illustrate the use of *à* for expressing ongoing (360), habitual (361), and generic (362) situations. Texts in brackets indicate the contexts in which the statements were made.

[Your dad is not here. What is keeping him at home?]

(360) *Wà* *à* *kpā* *náŋgààŋ-ká.*
CL.1 IPFV weed backyard.5-DEF.5
'He is weeding the backyard.'

[Do you think the people always wear the facemask as we advised?]

(361) *Bà* *à* *sū=ū=mā.*
CL.2 IPFV wear=FOC=PRED.EMPH
'They wear them (always).'

(362) *Bāā-sā* *à* *wūsī.*
dog-6 IPFV bark
'Dogs bark.'

Stative verbs are typically incompatible with the Imperfective marker, because they express static or unchanging situations. As exemplified in (363), no additional morphological marking is required to express states.

(363) *Tìì-tà-ŋá* *pɔ̄sīmā.*
medicine-8-DEF.4 be.small
'The medicines are insufficient.'

香港大學圖書館 HKU Libraries

In contrast to imperfective aspect marking, the perfective aspect is marked by a replacive low tone on verbs. The perfective aspect categorises situations or events as 'past' or completed without focusing on the process or duration involved. The sentences in (364) and (365) are perfective.

[A statement about recovered patients.]

(364)	*Tì*	*tèbì*	*nú-(ba)-má*	*míéná*	*ká=mā.*
	1PL	treat.PFV	person-2-DEF.2	all	FOC=PRED.EMPH

'We treated all the people.'

[Adem did not do his work. He will miss the funeral.]

(365)	*Àdēm*	*tòm*	*tūīn-ní.*
	NAME	work.PFV	work.3-DEF.3

'Adem did the work.'

The Perfect marker *yá* is used to emphasise the completion (outcome or end result) of events or situation, usually in face-to-face contexts. This is illustrated in (366) and (367).

(366)	*Bà*	*gèb*	*mɔ̄g-(i)-ní*	*yá*
	CL.2	cross.	river-3-DEF.3	PRF

'They have crossed the river.

(367)	*Àchúm*	*kààbì*	*bɔ̀glùk-kú*	*yá*
	NAME	sacrifice	shrine.7-DEF.7	PRF

'Achum has sacrificed to the shrine.'

Since constructions like (366) and (367) focus on the event or situation denoted by the verb, objects are often suppressed so that the perfect marker follows verbs directly.

香港大學圖書館 HKU Libraries

(368) a. *Àjùdɔ̀k* *tɔ̀ŋ* *bí-(rí)-ní* *yá.*
NAME cast seed-3-DEF.3 PRF

‘Ajudok has cast the seed (die).’

b. *Àjùdɔ̀k* *tɔ̀ŋ* *yá.*
NAME cast PRF

‘Ajudok has cast (the seed/die).’

(369) *Dàyūūk-kú* *lò* *yá.*
bandicoot.7-DEF.7 fall PRF

‘The bandicoot has fallen.’

6.2 Marking future tense with *lì*

Future tense is marked with *lì*, as (370) illustrates. The verb bears Mid tone.

(370) *Tì* *lì* *ŋōōnī* *bù-tà* *bùtà.*
1PL FUT screen CL.9-three CL.9-three

‘We will screen (them) thrice each.’

(371) *Dókútà-(ba)-má* *lì* *jām* *nyà* *ní.*
doctor-(2)-DEF.2 FUT come see 2PL

‘The doctors will come and see you.’

香港大學圖書館 HKU Libraries

6.3 Recent past marking with *pòòm*

Pòòm is used to describe an action that has been completed recently at an indefinite time in the past, as illustrated in (372) and (373).

(372) *Àbìlá* *pòòm* *kā* *yé-rí*
NAME REC.PST not.located home-3
'Abila was not at home.' [when I went there recently].

(373) *Līgrī-ní* *pòòm* *dɔ̄ā* *ká* *dé.*
money.3-DEF.3 REC.PST lie FOC here
'The money was lying here.' [I saw it very recently]

6.4 Cancelled past marking with *jàm*

Jàm is used to describe a situation which once existed a long time the past but has now ceased. *Jàm* appears to be etymologically related to the verb *jàm* 'come.PFV'. Constructions like (374) and (375) could be construed as 'coming to exist in a situation or state and then leaving it.'

(374) *Pāgrɔ̄-bā* ***jàm*** *bō* *Sándēm.*
strongman-2 CNC.PST be.located PLACE
'There once were strong men in Sandema.'

(375) *Àpàábé* ***jàm*** *tā* *ká* *níígà..*
NAME CNC.PST possess FOC cow.4
'Apaabe once had cattle.'

香港大學圖書館 HKU Libraries

6.5 **Progressive aspect**

The progressive aspect is expressed by means of a periphrastic construction involving *bō* 'be located' + *dú* 'there' [bòró]. The deictic adverb *dú* has lost its independence in this context to become *=ró*. A progressive construction involves *bòró*, the imperfective marker *á*, and a verb denoting a situation being described as ongoing, as illustrated in (376). In speech, *bòró* and *á* are typically fused and realised as [bòrá:], or the deictic adverb *=ró* is dropped so that *bò* + *á* is realised as [bwá:]. These progressive constructions could be construed literally as 'to be located in an activity' (e.g. To be at 'building', To be at 'searching', etc.).

(376) *Bà* *bò=ró* *á* *sē=ē* *wén-à*
CL.2 be.located=there IPFV build=FOC god-4
'They are building shrines.'

(377) *Tì* *bò=ró* *á* *gīsī* *dììnà* *ŋà-chāāb.*
1PL be.located=there IPFV build house.4 CL.4-other
'We are searching for other houses.'

This 'be-at-activity' strategy of coding progressive aspect usually cannot be used with motion verbs (e.g. *chɛ̄ŋ* 'go', *chālī* 'run', etc.) because of the contradictory interpretations that a combination of the two would create. As illustrated with *chɛ̄ŋ* 'go' (378), the imperfective marker *à* is required to mark the progressive aspect of motion verbs.

(378) *Nípō-(ba)-má* *mɛ̄* *à* *chɛ̄ŋ* *ká=mā.*
woman-2-DEF.2 also IPFV go FOC=PRED.EMPH
'The women are also going.'

香港大學圖書館 HKU Libraries

The verbs *jām* ‘come’ and *chīēn* ‘coming’ are involved in a kind of suppletion that allows *chīēn* to be used as the progressive form of *jām*. Thus, a ‘*jām*-habitual’ construction has a *chīēn* construction as its progressive form. Compare (379)a. and (379)b.

(379) a. *Tàmá* *à* *jām* *ká=mā*
1PL.INCL IPFV come FOC=PRED.EMPH
‘We come.’

b. *Tàmá* *chīēn* *ká=mā*
1PL.INCL coming FOC=PRED.EMPH
‘We are coming’

Also, *chīēn* ‘coming’ is used in complex constructions such as (380) to describe an activity that is expected, likely to happen, or anticipated in the future. This kind of construction signifies moving into a situation near in time, so the terms ‘prospective’ (see Heine 1994) and ‘proximate’ (see Yakpo 2019) are sometimes used to describe this aspect.

(380) *Ǹ* *chìēn* *ǹ* *mānī* *kāpòn-tà-ŋá*
1SG come 1SG stir millet.gruel-8-DEF.4
‘I am about to stir the millet gruel.’

Several other verbs, such as *zā* ‘stand’, *pīīlīm* ‘begin’, and *nūērī* ‘finish’, are used to express aspectual meanings. *Zā* ‘stand’ expresses a prospective meaning (381), whereas *pīīlīm* ‘start’ expresses an inceptive meaning (382). Similarly, *àyén* ‘say’ conveys a potential meaning (383), while *nūērī* conveys a perfect meaning (384).

香港大學圖書館 HKU Libraries

(381) *Bù* *zà=á*[25] *bù* *vāāsī* *ká=mā.*
CL.9 stand=COMP CL.4 boil FOC=PRED.EMPH

'It (gruel) is going to boil.'

(382) *Àwén* *pììlìm* *á* *sē* *wén.*
NAME start.PFV IPFV worship god

'Awen started building a shrine.'

(383) *Tūēm-mú* *àyén* *bù* *kāāsī* *ká* *tì* *bō-ká.*
disease.9-DEF.9 say CL.9 destroy FOC 1PL live-NMLZ.5

'The disease is going to destroy our livelihood.'

(384) Tì *ŋòònì* *nú-(ba)-má* *nùèrì.*
1PL screen.PFV person-(2)-DEF.2 finish

'We have screened the people.'

[25] Related to *àyén* 'say, COMP'

6.6 Mood and Modality

Mood expresses notions such as assertion, possibility, desire, doubt, and conditionality. Mood in Buli has been described briefly in previous studies (e.g. Mélançon, Coutu & Prost 1974; Kröger 1992; Schwarz 2005). These studies identify three moods, viz., indicative, subjunctive, and imperative. The vast majority of constructions used as examples throughout this work are Indicative; they state facts or ask questions. Hence, this section will focus on the subjunctive and the imperative moods. Some constructions used to express certain subjunctive and imperative moods are identical, as can be seen in (385) and (386).

(385) *Nì* *wārī* *yé-rí.*
2PL stay home-3
'You should stay at home.' / 'Stay at home!'

(386) *Tì* *kāsī* *tūēm-mú*
2PL fence.off disease.9-DEF.9
'We should fence off the disease.'/ 'Let's fence off the disease.'

香港大學圖書館 HKU Libraries

6.6.1 Imperative

Since the imperative issues a direct command to an addressee to perform an activity, the subject is typically dropped (387). The addressee can be directed to keep performing an activity continuously without ceasing, in which case the imperfective marker *á* is used (388).

(387) a. *Zāānī* *gérímm.*
stand firm:IDEO
'Stand firm!'

b. *Bāsī!*
'Stop!'

(388) a. *Á* *sūūrī* *nì* *ní-sá-ŋá.*
IPFV wash 2PL hand-6-DEF.4
'Keep washing your hands!'

b. *Á* *kūrī!*
IPFV pound
'Keep pounding!'

香港大學圖書館 HKU Libraries

6.6.2 Making suggestions and expressing wishes

To express a strong suggestion or encouragement involving the speaker (sometimes called 'cohortative'), the first-person plural pronoun *tì* is used in a 'let' multi-verb construction. Such constructions are translated into English by means of the *let's*-periphrasis (389).

(389) *Nì* *tɛ̄* *tì* *tì* *yīg* *chāāb.*
2PL let CONN 1PL hold each.other
'Let's cooperate with one another.'

Hopes, wishes, desires, or blessings can be expressed without additional morphology, as seen in (390). This type of construction is sometimes called 'optative').

(390) *Nààwén* *māārī* *tí.*
god help 1PL
'May God help us.'

6.6.3 Modality

Cross-linguistically, mood and modality have been shown to be closely related notions that overlap in several ways, with mood sometimes defined as the domain of coding modal meanings or as the grammatical expression of modality (Nuyts & Van Der Auwera 2016). Modality, for the purpose of this study, refers to a speaker's mental disposition or judgment towards a proposition that an utterance expresses. Constructions used to express modality vary considerably. I follow the three semantic domains of modality widely used in seminal studies on the topic, namely dynamic modality, deontic modality, and epistemic modality (e.g. Von Wright 1951; Palmer 2001).

香港大學圖書館 HKU Libraries

6.6.3.1 Dynamic modality

Dynamic modality is concerned with the existence of conditioning factors that are internal to the subject and control the course of the situation denoted by the reference verb (Palmer 2001: 9, 70). Dynamic modality stems from a speaker or a relevant individual's ability, desire, or intention which does not emanate from an external force.

The verb *bāgī* 'be able' can express ability (391).

(391) *Nísɔ̄-(ba)-má* *bàg* *á* *bīīsī* *Bùlì* *sɔ̀blík.*
old.person-(2)-DEF.2 be.able IPFV speak NAME dark.5
'Old people can speak metaphorical Buli.'

A future tense construction can express desire or volition. In contexts like (392), *lì* chiefly indicates a speaker's wishful desire for a position. If the subject is a first-person person, *lì* imparts commissiveness (393).

(392) *Tì* *lì* *dē* *tɛ̄ŋ-ká* *zúk.*
1PL FUT reign.over land.5-DEF.5 top.7
'We will reign over the land.'

(393) *Tì* *lì* *māārī* *nú-bá* *yègà.*
1PL FUT help person-2 a.lot
'We will help many people.'

The verb *yāālī* expresses strong desire and wish, as exemplified in (394).

(394) *Tì* *à* *yāā* *ká* *nyìŋ-yɔ̀g-sá.*
1PL IPFV want FOC body-cool-6
'We want peace.'

香港大學圖書館 HKU Libraries

6.6.3.2 Deontic modality

Deontic modality concerns the existence of external conditioning factors, which, according to Palmer (2001: 10), "typically and frequently tends to be the authority of an actual speaker giving permission to or laying an obligation on an addressee."

Permission can be expressed by means of the verb *bāgī* 'be able'. Sentence (395) indicates permission granted to an audience to mourn people who have passed away.

(395) *Nì* *bàg* *á* *kūm* *ká=mā*
2PL be.able IPFV mourn FOC=PRED.EMPH
'You may mourn (the deceased).'

Obligation can be expressed by means of *fɛ̄* 'to compel, force, oblige'. This is usually done using the periphrasis *Kù à fɛ̄ (...)* 'It is compelling (…)' in a complex construction.

(396) *Kù* *à* *fɛ̄* *àtì* *tì*
CL.7 IPFV compel CONN 1PL
mìèná *kpālīm* *tūēm-mú*
all fight disease-DEF.9
'It is compelling that we all fight the disease.'

Necessity is expressed in a similar way by means of the verbs *māgsī* 'be necessary' and *zīg* 'be necessary' (397).

(397) *Kù* *à* *māgsī* *ká* *tì* *wōm* *wá(ri)-ní.*
CL.7 IPFV be.necessary FOC 1PL listen issue.3-DEF.3
'It is necessary that we listen to the issue.'

香港大學圖書館 HKU Libraries

6.6.3.3 Epistemic modality

Epistemic modality is concerned with 'a speaker's judgment of attitude to a proposition as determined by how the speaker judges the truth-value or factual status of the proposition' (Palmer 2001: 7–9, 24–25). The speaker's judgement of the proposition is determined by some previous knowledge or experience, based on which the speaker expresses possibility or necessity. Possibility indicates a weak, partial, or uncertain stance on the part of the speaker, but necessity conveys a speaker's full certainty or commitment.

Possibility can be expressed by means of *bāgī* 'be able'. Example (398) expresses the meaning that the referent might be in a certain location because the speaker does not find the referent in a usual location.

(398) *Wà* *bàg* *ká=mā* *bō* *wà*
CL.1 be.able FOC=PRED.EMPH be.located CL.1
mà-wá *yé-ní*
mother.1-DEF.1 house-DEF.3
'He might be at his mother's house.'

香港大學圖書館 HKU Libraries

Sentence (399) was expressed when the speaker noticed darkening clouds. The expression of possibility in this case is based on the speaker's knowledge and experience that cloudy weather brings rainfall.

(399) *ŋ̀mòrùk-kú* *bàg* *á* *nī=ī=mā*
rain.7-DEF.7 be.able IPFV rain=FOC=PRED.EMPH
'It might rain.'

Depending on the context, the future tense construction can express possibility or prediction (400). When used with a first-person pronoun, *lì* imparts a commissive meaning (401).

(400) *Bù* *lì* *nyɛ̄* *kúkúl-á.*
CL.9 FUT do lump-4
'It (gruel) will have lumps.'

(401) *Tì* *lì* *tūnī* *ní*
1PL FUT pay 2PL
'We shall pay you.'

香港大學圖書館 HKU Libraries

The adverbial modifiers *ná* and *nápólí* ‘by now’ conveys a meaning similar to English ‘perhaps’. These two words express possibility (402)-(403).

(402)	*Bà*	*ná*	*kpìmsì*	*kànàà-sà-ŋá*	*ká=mā.*
	CL.2	perhaps	turn.off	lantern-6-DEF.4	FOC=PRED.EMPH

‘Perhaps, they turned off the lights.’

(403)	*Nápólí,*	*bà*	*bò=ó*	*súúk*
	perhaps	CL.2	be.located=FOC	path.7

‘Perhaps, they are on their way (coming).’

The verb *zā* ‘stand’, which expresses prospective aspect, also indicates strong possibility or prediction in contexts like (404).

(404)	*Bù*	*zà=á*	*bù*	*wāāŋ*	*ká=mā*
	CL.9	stand=COMP	CL.9	boil	FOC=PRED.EMPH

‘It (disease) is certainly going to spread.’

The element *kàá* (*kàn* ‘NEG’ + *á* ‘COMP’) doubt in contexts like (405).

(405)	*Bà*	*kà=á*	*bà*	*tōm*	*túín-ní.*
	CL.2	NEG.IPFV=COMP	CL.2	do.work	work.3-DEF.3

‘They most likely would not do the work.’

香港大學圖書館 HKU Libraries

A range of constructions are also used to express different degrees of (un)certainty and commitments. For instance, *pōlī* 'think' and *kù nyɛ̄ sī* {it do like} 'seem' express uncertainty (406) and partial commitment (407), whereas *sēb* 'know' and *tā síáká* {have conviction} 'be convinced' express high-level certainty and full commitment (408)-(409).

(406) *Mí à pōlī wà kò bá mɛ̄ ká=mā.*
1SG IPFV think CL.1 kill.PFV CL.2 also FOC=PRED.EMPH
'I think he killed them also.'

(407) *Kù à nyɛ̄ sī wà kā jíírím*
CL.7 IPFV do like CL.1 not.have compassion.9
'It seems he does not have compassion.'

(408) *Mí sēb bà lì nyā pāgrīm.*
1SG know CL.2 FUT get strength.9
'I know they will gain strength.'

(409) *Tì tā síág-ká sī kù kàn bēnī.*
1PL have convince-NMLZ.5 COMP CL.7 NEG delay
'We have a conviction that it would not delay.'

香港大學圖書館 HKU Libraries

6.7 Negation

Two morphemes mark negation in Buli: *kàn* and *àn*. Future and Present-time constructions form their negative counterparts by means of *kàn*, while Past-time constructions form their negative counterparts by means of *àn*. The focus marker *ká* has *dāā* as its opposite, and the locative verb *bō* and the possessive verb *tā* have *kā* as their opposite.

6.7.1 Negative imperfective

Imperfective situations are negated using *kàn*, as exemplified in (410) and (411):

(410) *Àtúgá* *kàn* *ŋɔ̄b* *bīāk.*
NAME NEG.IPFV see dog.5-DEF.5
'Atuga does not eat dog meat.'

(411) *Ǹ* ***kàn*** *nyā* *bààŋ-ká.*
1SG NEG.IPFV see lizard.5-DEF.5
'I do not see the lizard.'

6.7.2 Negative future

Future situations are negated by means of *kàn*. This is illustrated in the following extract:

(412) A: *Nì* ***kàn*** *jām* *Sàlàgà*?
2PL NEG.FUT come PLACE
'Will you not come to Salaga?'

B: *Tì* ***kàn*** *jām.* *Tì* *lì* *līŋ* *chɛ̀ŋ* *Wa.*
1PL NEG.FUT come 1PL FUT initially go PLACE
'We will not come. We will initially go to Wa.'

香港大學圖書館 HKU Libraries

6.7.3 Negative imperative

Kán marks negative imperative, as exemplified in (413).

(413) ***Kán*** *zèrì* *tììm-mú.*
NEG.IMP refuse medicine.9-DEF.9
'Do not refuse the medicine.'

(414) ***Kán*** *á* *kūm.*
NEG.IMP IPFV cry
'Do not keep crying.'

香港大學圖書館 HKU Libraries

6.7.4 Negative perfective

Perfective situations are negated by means of *àn*. Compare (415) and (416):

(415) *Bábátù* ***àn*** *kō* *nípō-bā.*
NAME NEG.PFV kill woman-2

'Babatu did not kill women.'

(416) *Tɔ̄m-mú* ***àn*** *kààsí* *tɛ̀ŋ* *kà-lá*
warband.9.DEF.9 NEG.PFV destroy land.5 CL.5-DIST

'The warband did not destroy that land.'

6.7.5 Negative states

Situations that describe states are negated by means of *àn* (417).

(417) *Ɗmán-á-ŋá* *àn* *sāālā.*
okro-4-DEF.4 NEG be.slimy

'These okras are not slimy.'

(418) *Súúk-kú* *wɔ̄ŋā.*
path.7-DEF.7 be.far

'The distance is far.'

香港大學圖書館 HKU Libraries

6.7.6 Negative progressive

Progressive situations are negated by means of *àn*. This is illustrated in the following:

(419) *Àdēm* ***àn*** *bò=á* *kāābī* *bɔ̀glùk-kú.*
NAME NEG be.located=IPFV sacrifice shrine.7-DEF.7

'Adem is not sacrificing to the shrine.'

(420) *Bà* ***àn*** *bò=á* *pōtī* *chùmbén-á.*
CL.2 NEG be.located=IPFV hand.shuck corn-4

'They are not hand-shucking corn.'

6.8 Suppletion in negation

6.8.1 *ká* versus *dāā*

The focus marker *ká* has a negative counterpart *dāā.* Compare (421) and (422).

(421) *Àzántìló* *ká* *Bùlìsà* *nààb.*
NAME FOC NAME.6 chief.1

'Azantilo is Bulisa chief.'

(422) *Àzántìló* *dāā* *Bùlìsà* *nààb.*
NAME NEG.FOC NAME.6 chief.1

'Azantilo is not Bulisa chief.'

香港大學圖書館 HKU Libraries

6.8.2 *bō* versus *kā*

The negative counterpart of *bō* ‘be located’ is *kā* ‘not located’, as exemplified in (423).

(423) a. *Bà* *bò* *Báláŋ-sá*
CL.2 be.located PLACE-6
‘They are in Balangsa.’

b. *Bà* *kā* *Báláŋ-sá*
CL.2 not.located PLACE-6
‘They are not in Balangsa.’

6.8.3 *tā* versus *kā*

The negative counterpart of *tā* ‘have, possess’ is *kā* ‘not have’, as shown in (424).

(424) a. *Àyɔ̀mà* *tà* *níígà.*
NAME have cow.4
‘Ayoma has cattle.’

b. *Àyɔ̀mà* *kā* *níígà.*
NAME not.have cow.4
‘Ayoma does not have cattle.’

However, when *tā* does not express possession but ‘take’ in a ‘take’-SVC, *àn* functions as a negation marker.

(425) *Bábátù* *àn* *tà* *bá* *chɛ̀ŋ* *Wàgàdúgù.*
NAME NEG.PFV take CL.2 go PLACE
‘Babatu did not take them to Ouagadugu.’

香港大學圖書館 HKU Libraries

6.8.4 Suppletion involving the prospective marker *zā* ('stand')

Suppletion in negation is also seen with *zā* 'stand,' which expresses the prospective aspect in certain contexts. Compare (426)a. and (426)b.

(426) a. *Bù* *zà=á* *bù* *dāānī* *tí.*
CL.9 stand=COMP CL.9 disturb 1PL
'It (disease) is really going to disturb us.'

b. *Bù* *kà=á* *bù* *dāānī* *tí.*
CL.9 NEG=COMP CL.9 disturb 1PL
'It (disease) is not going to disturb us.'

香港大學圖書館 HKU Libraries

6.9 Remarks on previous analyses of the negation markers

Due to the various surface manifestations, Buli negative markers have been analysed differently in some cases – usually with several forms than the two presented in this thesis. Schwarz (1999), for instance, initially identifies *kàń*, *káǹ*, *kàn*, *kàá*[26], and *àn* as well as some utterance final elements (e.g. perfect marker *yá*, epenthetic vowels, long vowels, and a glottal [ʔ]) as negation markers. She also presents various functions e.g. *kàá* and *kàń* as negative imperative, *kàn* and *àn* as negative indicative, *káǹ* as negative future, *káá* as negative subjunctive (with subdivisions such as Imperative II *kàń* and Indicative I *kàn*). Subsequent studies by the same author identify fewer negation markers, with *an* and *kan* being core and utterance final elements (previously considered to be second negative morphemes NEG2 reanalysed).

Contrary to this, Akanlig-Pare (2005) identifies three negative markers and assigns them functions as follows: *kàn* as an imperfective negative morpheme with future marking use, *àn* as a negative perfective marker, and *kán* as a negative imperative marker. This analysis aligns with mine.

However, in a comparative Gur study, Winkelmann & Miehe (2009) suggest that a nasal (presented as N) is the negative marker in Buli and other Gur languages (e.g. Cala, Jãane, Baatɔnum). But they describe the absence of N in *káá* (see [káá] in (428)) as a strange substitution of the imperfective *á* with N. The similarity of *ká-* (in kán) to negative markers in Mooré and Kɔnni, as recognised by Winkelmann & Miehe (2009), raises questions about considering N as a negative marker, at least in the synchronic state of Buli.

In my analysis and description, I consider *àn* and *kàn* to be the negation markers. The several forms presented in earlier studies are surface realisations due to assimilation between

[26] I consider this form to be *kàn* + *á* [kàá].

香港大學圖書館 HKU Libraries

these two negation markers and other sentence elements. For instance, the complementiser is losing its independence to become *á* after *kàn* (*kàn + á = kàá*) (427). The nasal consonant is falling out in this context. Similarly, when the imperfective marker *á* follows *kán*, the nasal tends to be dropped so that both elements are realised as [káá] (428).

(427) *Wà* *kà=á* *wà* *lāg* *i.*
CL.1 NEG.IPFV=COMP CL.1 open SP
'He is not going to open it.'

(428) *Nì* *kán* *á* *nyīnī* *pìèlím.* [Nì káá ɲīnī pìèlím.]
2PL NEG.IMP IPFV go.out outside.9
'Do not be going outside.'

Aspectual markers (e.g. *yá* 'PERF'), prosodic and/or utterance-final particles such as the glottalic closure, etc. may occur as final elements in negative constructions to serve other functions rather mark negation. § 6.1 *Yá* marks Perfect, and negation of the Perfect construction is achieved by means of *àn* (429). Sentence final particles, usually verbs or glottalic closure, can optionally be inserted utterance-finally for reinforcements.

(429) *Kù* *àn* *vààsí* *yà*
CL.7 NEG boil PRF
'It has not boiled.'

(430) *Fì* *kàn* *yāā* *bíík* *a*
2SG NEG.IPFV like child.5 SP
'Don't you like a child.'

香港大學圖書館 HKU Libraries

In one exceptional case, a tonal glide on the negation marker *kán* [káǹ] was used by a speaker (represented by B in the following scenario) to signal strong doubt.

[Speaker A indicates that the country's closed regional borders will be re-opened. Speaker B and Speaker C doubt this.]

(431) A: *Àbān-wá* *lì* *lāg* *bān-ní.*
government-DEF.1 FUT open border-DEF.4
'The government will open the border.'

B: *Wà* *káǹ* *lāg* *bān-ní.*
CL.1 NEG open border.3-DEF.3
'He most likely will not open the border.'

C: *Wà* *kà=á* *wà* *lāg* *i.*
CL.1 NEG=COMP CL.1 open SP
'He is not going to open it.'

香港大學圖書館 HKU Libraries

7 Simple clauses

7.1 Introduction

A clause consists of a group of words that form an utterance, expressing a speaker's thoughts, feelings, and emotions. While a verb is typically part of the elements that constitute a clause, not every clause contains a verb. When a verb is present in a clause, it is usually preceded by a subject argument and followed by an object argument. Aspect, tense, and negation morphemes appear before the verb to fulfil grammatical functions. Additionally, various adverbial modifiers and clausal particles, which serve diverse functions, may occur in verbal clauses. Non-verbal clauses – such as presentational, identificational, and equative clauses – are less elaborate and typically occur without modifiers, making them relatively shorter in form compared to verbal clauses. Minimal utterances of various word categories, such as nominal invectives (e.g. *sééjè* 'bastard') and interjections (e.g. *gègè* 'all right'), also exist but typically function as stand-alone elements. The constituents of the clause combine with suprasegmental features, such as tone, to create an intricate system.

The remaining sections of this chapter are organised as follows. Section 7.2 discusses the basic verbal clause, followed by existential and locative clauses (§ 7.3), the possessive clause (§ 7.4), the identificational and equative clauses (§ 7.5), and the presentational clause (§ 7.6). Section 7.7 covers three question construction: polar questions (§ 7.7.1), alternative questions (§ 7.7.2), and content questions (§ 7.3).

香港大學圖書館 HKU Libraries

7.2 Basic verbal clauses

A verb is the core element of a basic verbal clause. Typically, a subject precedes the verb, and if the verb is transitive, an object follows it, resulting in an SVO structure. Subjects are in the nominative case, while objects are in the accusative case. Grammatical morphemes such as tense, aspect, mood, and negation markers, when present, occur preverbally (after the subject). Adverbial modifiers are optional elements. The tone of the verb is determined by the grammatical category being encoded and the syntactic context in which the verb occurs. A low tone on the verb typically indicates the perfective aspect.

Example (432) illustrates a basic SVO construction. Pronominals agree with their referents semantically, as shown in (433): *wà* refers to a notorious slave raider, and *bá* refers to a society.

(432) *Dàgbàn-má* *kààsì* *tɛ̄ŋ-ká*
NAME.2-DEF.2 destroy.PFV land.5-DEF.5
'The Dagomba people destroyed the land.'

(433) *Wà* *lì* *nāmsī* *bá.*
CL.1 FUT torture CL.2
'He will torture them.'

Weather conditions, events, and sensations can function as arguments in the subject or object slots. Elements occupying the subject and object slots typically serve as semantic agents and patients, respectively.

香港大學圖書館 HKU Libraries

(434) *Tūēm-mú* *yìg* *wà* *bì-sà-ŋá*
disease.9-DEF.9 attack.PFV CL.1 child-6-DEF.4
'The disease attacked his children.'

(435) *Ŋmɔ̀rùk* *mììrì* *tàmá.*
rain.7 beat.PFV 1PL.INCL
'Rain beat us.'

(436) *Kpālīm-mú* *dàànì* *tì* *bō-ká*
conflict.9-DEF.9 disturb.PFV 1PL live-NMLZ.5
'The conflict disturbed our livelihood.'

Many Buli verbs exhibit flexible valency. They can take both a subject and an object, or the object can be suppressed – even with verbs, such as 'cut' and 'beat' that are widely reported to be prototypically transitive. Compare the pair of sentences in (437).

(437) a. *Kpārɔ̄-wá* *chè* *zà-à-ŋá* *yá.*
farmer.1-DEF.1 harvest millet-4-DEF.4 PRF
'The farmer has harvested the millet.'

b. *Kpārɔ̄-wá* *chè* *yá.*
farmer.1-DEF.1 harvest PRF
'The farmer has harvested.'

The subject can also be suppressed, and the object can be moved to the subject position to emphasize the affected entity and the action affecting it. Constructions like (438) serve specific discourse-pragmatic functions, as the context and translation demonstrate.

香港大學圖書館 HKU Libraries

[After instructing Speaker B to harvest millet, Speaker A inquires with strong expectation for an affirmative response. Speaker B responds affirmatively, but Speaker C opposes the claim.]

(438) A: *Zá-á-ŋá* *chè* *yá?*
millet-4-DEF.4 cut PRF
'(I hope) the millet has been harvested.'

B: *Ɗà* *chè* *yá.*
CL.4 cut PRF
'It has been harvested.'

C: *Ɗà* *àn* *chē* *yà.*
CL.4 NEG cut PRF
'It has not been harvested.'

Some verbs are inherently intransitive. These include verbs that express weather phenomena (439), ascribe a quality to an entity (440), or describe the disposition of an entity (441).

(439) *Ɗmɔ̀rùk* *à* *nī.*
rain.7 IPFV fall
'It rains.'

(440) *Bà* *yɔ̄gsā.*
CL.2 be.afraid
'They are afraid.'

(441) *Nídɔ̄-(ba)-má* *dòmsì.*
man-2-DEF.2 squat.PFV
'The men squatted.'

香港大學圖書館 HKU Libraries

Imperatives exhibit syntactic peculiarities. The subject is usually expressed for all persons except the singular first person pronouns. If a first-person singular pronoun is not explicitly stated, as in (443), the verb becomes the sole element of the clause.

(442) *Nì* *zāānī*
2PL stand
'Stand firm!'

(443) *Nyā*!
Watch!

Negating verbal clauses is primarily achieved through the use of *àn* and *kàn*, as discussed in § 6.7. The following are examples demonstrating the use of *àn* and *kàn* in verbal negation.

(444) *Sāā(b)-mú* *àn* *tūīlā.*
millet.gruel.9-DEF.9 NEG be.hot
'The millet gruel is not hot.'

(445) *Bùlùk* *kàn* *lō.*
PLACE NEG.FUT collapse
'Buluk will not collapse.'

A final point worth noting about verbal clauses is that they vary considerably. Verbal clauses are elaborated through a range of elements that function as complements and adjuncts. The following are brief notes with examples regarding verbal clauses:

香港大學圖書館 HKU Libraries

a) Some verbs have ditransitive uses for forming double-object constructions. In a double-object construction, the first and the second objects may take Beneficiary and Theme roles respectively (446). A nominal may complement the object (447) or express a location (448).

(446) *Bà* *sàg* *nú-(ba)-má* *yām.*
CL.1 teach.PFV person-2-DEF.2 wisdom.9
'He taught the people sense.'

(447) *Kànjāg* *yìg* *Àyárík* *nààb.*
NAME catch.PFV NAME chief.1
'Kanjag (people) enthroned Ayarik as chief.'

(448) *Bàŋ* *à* *màŋ* *síák-ká* *ŋààŋ.*
CL.6 IPFV stick wall.5-DEF.5 back.5
'A lizard is sticking to the back of the wall.'

b) The conjunction *(à)lì* can be used as a comitative marker to introduce arguments that serve instrumental (449), accompaniment (450), and containment (451) functions.

(449) *Bà* *kpàlìm* *lì* *tɔ̄mpéém-á*
CL.2 fight.PFV with arrow-4
'They fought using arrows.'

(450) *Tì* *ŋɔ̀bì* *sūm-á* *àlì* *kpáám.*
1PL chew.PFV bean-4 with oil.9
'We ate beans with oil.'

(451) *Tɛ̄* *mú* *nyíám* *lì* *bìèrīk.*
give 1SG water.9 with cup.5
'Give me a cup of water.'

香港大學圖書館 HKU Libraries

c) Question words (452) and locative nouns (453) can occupy the object slot:

(452) *Bùlìsà* *gù* *bɔ̀à?*
NAME.6 bury.PFV what
'Bulisa buried what?'

(453) *Nípō-(ba)-má* *kòòrì* *tɛ̄ŋ.*
woman-2-DEF.2 bend.PFV ground.5
'The women bent down.'

d) Ideophones and other adverbials can qualify the verb, as (454) and (455) illustrate.

(454) *Kù* *nyɛ̀* *lìmm.*
CL.7 do.PFV black:IDEO
'It [weather] went pitch black.'

(455) *Nì* *nyɛ̄* *kùkérí.*
2PL do.PFV well
'You have done well.'

(e) . Discourse-pragmatic elements (e.g. focus markers *ká* and *lī*), and the predicate emphasis marker *=mā* feature prominently in verbal clauses (456).

(456) a. *Nídɔ̄-(ba)-má* *à* *kō* *ká* *nááb.*
man-(2)-DEF.2 IPFV kill FOC cow.9
'The men kill A COW.'

b. *Nídɔ̄-(ba)-má* *à* *kō* *nááb* *ká=mā.*
man-(2)-DEF.2 IPFV kill cow.9 FOC=PRED.EMPH
'The men KILL A COW.'

香港大學圖書館 HKU Libraries

7.3 Existential and locative clauses

Location and existence are expressed using the verb *bō* 'be located.' This verb typically takes adverbial complements that specify a place, situation, state, or temporal frame in which entities are found or vaguely indicate the presence or existence of such entities. Since *bō* is stative, it is less compatible with tense and aspectual markers. The opposite of *bō* is *kā* 'not located.

Bō 'be located' can take the following elements as its complements:

a) Deictic adverb *dú* (=*rú*/=*ró*)

(457) *Nààwén* *bò=ró.*
god.3 be.located=there
'God exists.' / 'God is there.'

b) Place

(458) *Gōōr-ā* *bò* *Nímà*.
colanut-4 be.located PLACE
'There are colanuts at Nima.'

c) Spatial or relational nouns

(459) *Dì* *bò* *tìì(b)-mú* *kí-rí*
CL.3 be.located tree.9-DEF.9 root.flare-3
'It is at the root flare of the tree.'

(460) *Bà* *bò* *ŋààŋ.*
god be.located back.5
'They are behind (us).'

香港大學圖書館 HKU Libraries

d) Nouns and expressions denoting states and activities (usually include the adposition *pō* 'in')

(461) *Àdēm* *bò* *púpól-á* *pō.*
NAME be.located thought-4 in
'Adem is thinking.' (lit.: 'Adem is in a thoughtful state of mind.')

(462) *Fíɔ́k-kú* *bò=ó* *gɔ̀g-tà* *pō.*
baboon.7-DEF.7 be.located=FOC dance-8 in
'The baboon is dancing.' (lit.: 'The baboon is in a state of dancing.')

e) Question words

(463) *Kpāg-(a)-ŋá* *bò* *bɛ̄?*
elder-4-DEF.4 be.located where
'Where are the elders?'

Being a general locative verb, *bō* can predicate several elements to encode various notions. Elements that occupy the subject slot also vary. When elements that express weather conditions, sensations, or experiences are subject (as in (464) and (465)), experiences are coded. In such contexts, the deictic adverb *dú* (*=rú/=ró*) has a dummy function (466).

(464) *Kɔ́m* *bò=ró.*
hunger.9 be.located=there
'There is hunger.'

(465) *Wūlīm* *bò=ró*
sweat.9 be.located=there
'There is sweat.' ('The weather is humid.')

香港大學圖書館 HKU Libraries

(466) *Fì* *wá-(rí)-ní* *bò=ró.*
2SG issue-3-DEF.3 be.located=there

You have a good case.' (lit.: Your issue is there.')

Kā, the opposite of *bō*, is used to form negative existential and negative locative clauses. *Kā* exhibits similar morpho-syntactic characteristics as *bō* with respect to the kind of complements it takes. *Kā* can take the deictic adverb *dú ~ =rú* (467) or any of the elements presented above as a complement (as shown in (468)-(469)). However, whereas complements are obligatory with *bō*, they are optional with *kā* (470).

(467) *Ɔóó-tá* *kā=rú.*
cold-8 not.located=there

'The weather is not cold.' (There is not cold.')

(468) *Yés-á* *kā* *jèn-tà-ŋá* *pō.*
salt-4 not.located soup-8-DEF.4 in

'There is no salt in the soup.'

(469) *Mí* *níŋ* *kā=rú.*
1SG face not.located=there

'It is not my concern.' (lit.: My face is not there.')

(470) *Tūēm-mú* *ŋmàn* *kā.*
disease.9-DEF.9 no.longer not.located

'The disease no longer exists.'

香港大學圖書館 HKU Libraries

7.4 Possessive clause

Possession and ownership are expressed using the verb *tā* 'have'. The possessive clause conveys the idea that an entity is owned or possessed by a referent. Similar to locative and existential clauses, *kā* is used in negative possessive constructions. Sentence (471) provides an example of a possessive construction.

(471) *Àyɔ̀mà* *tà* *chāām.*
NAME have sheabutter.9
'Ayoma has shea butter.'

Tā-possessive constructions encode a range of notions beyond their basic function of expressing ownership. Similar to *bō*, *tā* extends into the semantic realm of sensations, emotions, attitudinal states, and habits (as illustrated in (472)-(475)).The subject of a *tā*-possessive construction is typically an Experiencer. In (472) and (473), the subjects *tì* and *Bùlìsà* are Experiencers because they possess or own certain attributes. These attributes – *jīīrīm* 'compassion' and *yám* 'wisdom' – are Themes. Conversely, in (474) and (475), the complements *bísáŋá* and *bá* are Experiencers, while the subjects *kɔ̄m* and *bīēm* are Themes.

(472) *Tì* *kpāg-(ā)-ŋá* *tà* *jīīrīm.*
1PL leader-4-DEF.4 have compassion.9
'Our leaders have compassion.'

(473) *Bùlìsà* *tà* *yám.*
NAME.6 have wisdom.9
'Bulisa have wisdom.'

(474) *Kɔ̄m* *tà* *bí-sá-ŋá.*
hunger.9 have child-6-DEF.4
'The children are hungry.' (lit.: Hunger has/owns the children.')

香港大學圖書館 HKU Libraries

(475) *Bīēm* *tà* *bá.*
evil.9 have CL.2
'They are evil.' (lit.: Evil has/owns them.')

As demonstrated in (476) and (477), elements such as question nominals and specific abstract nouns can serve as complements of *tā*, expressing particular notions.

(476) *Fí* *tā* *ká* *bɔ̀à*
2SG have FOC what
'What do you have?'

(477) *Bà* *tà* *nūēm-ká*
CL.2 have disturb-NMLZ.5
'They disturb.' (lit.: They have disturbance.)

Negation of the possessive construction is achieved through the suppletive *kā* 'not have/lack', as shown in (478)-(480). As illustrated in (480), a switch in the positions of the state and the individual described is possible in certain contexts.

(478) *Nàmá* *kā* *pám-à.*
2PL.EXCL not.have debt-4
'You have no debts.'

(479) *Ti* *kā* *wá-rí.*
CL.8 not.have issue-3
'We have no issue.'

香港大學圖書館 HKU Libraries

(480) a. *Nyìŋ-wɔ́rúk* *kā* *bà* *wá-í.*
body-indolence.7 not.have CL.2 CL.1-REL
'None of them is lazy. (lit.: Laziness has none of them.')

b. *Bà* *wá-í* *kā* *nyìŋ-wɔ́rúk*
CL.2 CL.1-REL not.have body-indolence.7
'None of them is lazy. (lit.: Laziness has none of them.')

7.5 Identificational and equative clauses

The focus marker *ká* is used to form identificational and equative clauses. In an identificational clause, *ká* gives prominence to the entity being identified, typically with no element preceding it. This is illustrated in (495) - (497).

(495) *Ká* *nááb*
FOC cow.9
'That is a cow.'

(496) *Ká* *pén*
FOC nail.3
'That is a nail.'

(497) *Ká* *núrí.*
FOC person.1
'That is a person.'

A (pro-)nominal can be introduced before the focus marker, particularly if the speaker has some knowledge about the referent. This adds a subtle nuance to the construction. Thus, the examples in (495) - (497) can alternatively be presented as follows.

香港大學圖書館 HKU Libraries

(498) *Bù* *ká* *nááb*
CL.9 FOC cow.9
'It, that is a cow.' ('It is a cow.')

(499) *Dì* *ká* *pén*
CL.3 FOC nail.3
'It, that is a nail.' ('It is a nail.')

(500) *Wà* *ká* *núrí.*
CL.1 FOC person.1
'He, that is a person.' ('He is a person.')

In question constructions that inquire about the identity of an unknown entity, the Class 7 pronoun *kù* is typically used if a pronoun is explicitly expressed. Compare the pair of sentences in (501).

(501) a. *Kù* *ká* *bɔ̀à*?
CL.7 FOC what
'WHAT is it?'

b. *Ká* *bɔ̀à*?
FOC what
'WHAT is that?'

Constructions similar to identificational clauses function as equative clauses, with the only difference being the (pro-)nominal that precedes the focus marker. In equative clauses, the lexical reference of the (pro-)nominal preceding the focus marker is not the same as the element following it. However, the element following *ká*, which is focal, is construed as associated with

香港大學圖書館 HKU Libraries

the element preceding it (502). As illustrated in (503) - (505), nominal expressions denoting qualities or time can also follow the focus marker to be equated with the element preceding it.

(502) *Ɗàn-(ta)* *tì-lé* *ká* *līgrā.*
thing-8 CL.8-PROX FOC money.4
'These things are MONEY.'

(503) *Bùlìsà* *ká* *pāgrɔ̄-bā.*
NAME.6 FOC strong-2
'Bulisa are strong (people)'

(504) *Jínlā* *ká* *dà-yɔŋ.*
today FOC day-different.7
'Today is a DIFFERENT DAY.'

(505) *Bábátù* *ká* *núrí* *bíɔ́k.*
NAME FOC person.1 evil.7
'Babatu is an evil person.'

(506) *Wà* *ká* *zúé.*
CL.1 FOC thief.1
'He is a thief.'

Negation of identificational and equative clauses is achieved by means of the negative focus marker *dāā*, which essentially replaces *ká*. Here, also, depending on the intended meaning, a (pro-)nominal may precede the focus marker. This is shown in sentences (507) - (510).

香港大學圖書館 HKU Libraries

(507) *Nú-(ba)* *bá-lá* *dāā* *nú-(ba)* *màŋ-sà.*
person-2 CL.2-DIST NEG.FOC person-2 good-6

'Those people are not good people.'

(508) a. *Bù* *dāā* *wāā(b)-fíík*
CL.9 NEG.FOC snake.9-small.5

'It is not a SMALL SNAKE.'

b. *Dāā* *wāā(b)-fíík*
NEG.FOC snake.9-small.5

'It is not a SMALL SNAKE.'

(509) a. *Kù* *dāā* *bààŋ* *a.*
CL.7 NEG.FOC lizard SP

'It is not a LIZARD.'

b. *Dāā* *bààŋ* *a.*
NEG.FOC lizard SP

'That is not a LIZARD.'

(510) a. *Wà* *dāā* *zúé.*
CL.1 FOC thief.1

'He is a thief.'

b. *Dāā* *zúé.*
NEG.FOC thief.1

'That is not a thief.'

香港大學圖書館 HKU Libraries

7.6 Presentational clause

The presentational clause is formed using the presentative demonstratives *ǹnā* 'here' and *(ǹ)lá* 'that.' This construction is primarily employed in face-to-face situations to present entities that are physically present to an addressee. The focus marker *lī* can optionally be inserted before the presentative demonstratives. In this case, the optional nasal particle of *(ǹ)lá* is typically dropped. The sentences in (511) and (512) illustrate presentational clauses.

(511) a. *Mí* *tɔ̄mpén-ní* *ǹnā.*
1SG arrow.3-DEF.3 PROX.PRSTV
'Here is MY ARROW.'

b. *Mí* *tɔ̄mpén-ní* *lī* *ǹnā.*
1SG arrow.3-DEF.3 FOC PROX.PRSTV
'Here is MY ARROW.'

(512) a. *Yé-(rí)-ní* *ǹlá*
house-3-DEF.3 DIST.PRSTV
'That is the HOUSE.'

b. *Yé-(rí)-ní* *lī* *lá*
house-3-DEF.3 FOC DIST.PRSTV
'That is the HOUSE.'

To form a negative presentational construction, the negative focus marker *dāā* is used. It is inserted sentence-initially to negate the presentational clause, as illustrated in (513) and (514).

(513) *Dāā* *bálàngì-rí* *ǹnā.*
NEG.FOC crab-3 PROX.PRSTV
'This is not a CRAB.'

(514) *Dāā* *bòòsūk* *ǹlá.*
NEG.FOC grave.7 DIST.PRSTV
'That is not a GRAVE.'

香港大學圖書館 HKU Libraries

7.7 Question constructions

Three types of question constructions occur in my corpus: polar (*yes* or *no*) questions, content questions, and alternative questions. Each of these constructions can be distinguished based on their structure and the kind of responses they elicit. The "lax question intonation" reported as a Macro-Sudan areal feature (see Güldemann 2018)is also found in Buli, but intonation patterns of questions are not covered in this thesis.

7.7.1 Polar questions

Polar questions are formed in the same way as simple declarative SVO constructions but are expressed with question intonation. They elicit simple yes or no responses from a listener. The interjections *ééé* 'yes' and *m̄m̄m̄* 'yes' are commonly used as affirmatives to indicate acceptance, agreement, or compliance, whereas the expressions *ààyà ~ ààì* 'no' and *ŋààī* 'no' are used as negatives to indicate denial or refusal. This is illustrated in (515) and (516). The square brackets in these examples indicate that the element following the simple *m̄m̄m̄* and *ààī* responses is optional.

(515) A: *Tūēm-mú* *bàsì* *fí?*
disease.9-DEF.9 leave.PFV 2SG
'Did the disease leave you?'

B: *M̄m̄m̄, [bù* *yāā* *bāāsā* *ká=mā].*
yes, CL.9 now be.soft FOC=PRED.EMPH
'Yes, it (disease) is now better.'

香港大學圖書館 HKU Libraries

(516) A: *Wà* *kàn* *yāālī* *bíík* *à?*
CL.1 NEG.IPFV want child.5 SP

'Doesn't she want a child?'

B: *Ààī,* *[wà* *bàsì* *bīām* *ká=mā].*
No, CL.1 cease.PFV child.bearing.9 FOC=PRED.EMPH

'No, she has ceased childbirth.'

7.7.2 Alternative questions

Alternative questions consist of two clauses or expressions conjoined using *yàā* 'or' (517)-(519). An addressee typically selects one of two options provide in response to the question, although a simple *yes* or *no* response can be used. Ellipses of like items usually apply in the second coordinand.

(517) *Nì* *à* *sūūrī* *ní-sá* *yàā* *nì* *kàn* *sūūrī?*
2PL IPFV wash hand-6 or 2PL NEG.IPFV wash

'Do you wash (your) hands, or you do not wash (your hands).'

(518) *Bà* *à* *tɛ̄* *ká* *zíím* *yàā* *tìì-tà* *a?*
CL.2 IPFV give FOC blood or medicine-8 SP

'Do they give BLOOD or MEDICINE?'

(519) *Jèn-tà-ŋá* *vààsì* *yàā* *tì* *àn* *vààsí* *yà?*
soup-8-DEF.4 boil.PFV or CL.8 NEG boil PRF

'Has the soup boiled or not?'

香港大學圖書館 HKU Libraries

The corpus contains the question structure in (520) and others like it. This question is a biased type that expects the addressee to agree with a proposition. This construction is used in conversational narratives to facilitate dialogic exchange.

(520) *Wà* *àn* *tā* *nípō-(ba)-má* *chèŋ* *ká=mā*
CL.1 NEG take woman-2-DEF.2 go.PFV FOC=PRED.EMPH
yàā?
or
'Had he not taken the women away?' [What do you expect]?'

The question nominal *bɔ̀à* 'what' can replace the second coordinand. In such contexts, *bɔ̀à* represents an alternative that inquires about the addressee's opinion (521).

(521) *Wà* *kò* *bá-lá-má* *ká=mā,* *yàā* *bɔ̀à?*
CL.1 kill.PFV CL.2-DIST-DEF.2 FOC=PRED.EMPH or what
'He killed all those people, or what?

The interjection *kóó* is used as a question tag to seek confirmation or agreement from an addressee (522).

(522) *Nì* *kàn* *jō* *nú-bá* *bɔ́rí* *pō,* *kóó?*
2PL NEG.IPFV enter person-2 many in INTJ
'You do not join a crowd, right?'

香港大學圖書館 HKU Libraries

7.7.3 Content questions

Content questions seek specific details, facts, or information from the addressee rather than eliciting a simple *yes* or *no* response. They are formed using interrogative pronouns and periphrastic expressions. Most of these interrogative expressions are typically moved to clause-initial position, with a few (especially *sɛ̀* ‘how’ and *lè* ‘be where’) being restricted to utterance-final position.

Table 38 presents the types of entities that interrogative expressions typically inquire about. The name, class, or property of an entity may be specified, as in *bɔ̀à jāāb* (pl. *ŋántá*) ‘what thing(s)’ and *bɛ̄ kāūk* ‘which part’. Following the table are a few questions and responses that illustrate the use of interrogative expressions.

香港大學圖書館 HKU Libraries

Table 38: Functions of question words and expressions

Interrogative markers	Gloss	Function
a) CL + *-nà*		
wànà (CL.1)	who	Inquires about a person in Class 1
bànà (CL.2)	who	Inquires about people in Class 2
dìnà (CL.3)	which one	Inquires about a non-human entity in Class 3
ŋànà (CL.4)	which of them	Inquires about non-human entities in Class 4
kànà (CL.5)	which one	Inquires about a non-human entity in Class 5
sìnà (CL.6)	which of them	Inquires about non-human entities in Class 6
kùnà (CL.7)	which one	Inquires about a non-human entity Class 7
tìnà (CL.8)	which of them	Inquires about non-human entities in Class 8
bùnà (CL.9)	which one	Inquires about a non-human entity in Class 9
b) Others		
bɔ̀à	what	Inquires about entities and their nature
sɛ̀	how	Inquires about manner
lè	be where	Inquires about location of entities
bɛ̄	where	Inquires about location of entities
bɔ̀à nyīŋ	what reason	Inquires about reason, cause, or purpose
bɔ̀à lī sɔ̄ā	owing to what	Inquires about reason, cause, or purpose
dìnpō/dìsàpō	when	Inquires about time

香港大學圖書館 HKU Libraries

a) Inquiring about a person with *wànà* 'who':

(523) A: *Wà-nà* *lī* *jàm* *chīm* *Sándēm* *nààb?*
CL.1-INTERR FOC CNC.PST become PLACE chief

'WHO was the chief of Sandema at that time?'

B: *Àzántìló* *lī* *jàm* *chīm* *Sándēm* *nààb.*
NAME FOC CNC.PST become PLACE chief.1

'AZANTILO was the chief of Sandema then.'

b) Inquiring about entities with *bɔ̀à* 'what':

(524) A: *Félík-ká* *tà* *ká* *bɔ̀à* *ŋān-tā*
Whiteman.5-DEF.5 have.PFV FOC what thing-8
á *kpālīm?*
IPFV battle

'WHAT [weapons] did the Whiteman use for fighting?'

B: *Wà* *tà* *ká* *kànbòŋ* *dàà-tà*
CL.1 have.PFV FOC stranger.5 stick-8

'He used RIFLES.'

(525) A: *Bɔ̀à* *lī* *lá?*
what FOC CDM

'WHAT is that?'

B: *máágì*

'(It is) maggi.'

香港大學圖書館 HKU Libraries

c) Inquiring about reason with *bɔ̀à nyīŋ* 'why':

(526) A: *Bɔ̀à nyīŋ tì wà nàmsì nídɔ̄-(ba)-má dí-lá*
what reason CONN CL.1 maltreat.PFV man-2-DEF.2 CL.3-DIST
'Why did he maltreat the men that way?'

B: *Mí zē*
1SG not.know
'I do not know.'

d) Inquiring about time with *dìnpō* 'when':

(527) A: *Dìnpō lī bà bìàg fí?*
when FOC CL.2 born 2SG
'WHEN were you born.'

B: *Bà bìàg mí ká kpàlìŋ kpìèŋ-ká tām-mú.*
CL.2 born 1SG FOC fight big-DEF.5 time.9-DEF.9
'I was born DURING THE WORLD WAR.'

e) Inquiring about time with *dìsàpō* 'when':

(528) A: *Bà bìàg fí ká dìsàpō?*
CL.2 born.PFV 2SG FOC when
'WHEN were you born?'

B: *Bà bìàg mí ká* 1921.
CL.2 born.PFV 2SG FOC 1921
'I was born in 1921.'

香港大學圖書館 HKU Libraries

f) Inquiring about location of entities with *lè* 'be where' and *bē* 'where':

(529) A: *Ŋà* *lè* *e*?
CL.4 be.where SP

'Where are they (medals)?

B: *Ŋà* *lī* *ǹnā* *bō* *m̀* *ŋī-(ri)-ní* *pō.*
CL.4 FOC PROX.PRSTV SP 1SG neck-3-DEF.3 in

'Here THEY (medals) are around my neck.'

(530) A: *Wà* *bòòsūk-kú* *bò=ó* *bɛ̄* *kāūk.*
CL.1 grave.7-DEF.7 be.located=FOC where part.7

'Where is his grave?'

B: *Kù* *lī* *ǹlá,* *tììm-mú* *kí-rí*
CL.1 FOC DIST.PRSTV tree.9-DEF.9 root.flare-3

'There IT is under the tree.'

香港大學圖書館 HKU Libraries

- **Inquiring about manner and condition with *sɛ̀* 'how':**

(531) A: *Ká* *sɛ̀?*
FOC how
'How is it?'

B: *Ká* *nālīm*
FOC fine
'It is fine.'

(532) A: *Pō-má* *gɔ̀g* *ká* *sɛ̀?*
wife-DEF.2 dance.PFV FOC how
'How did the wives dance?'

B: *Pō-má* *dùèlìm* *ká=mā.*
wife-DEF.2 dance.PFV FOC=PRED.EMPH
'The women performed the *duelim* dance.'

香港大學圖書館 HKU Libraries

8 Spatial and temporal relations

8.1 Introduction

This chapter focuses on the means of expressing the relationship between entities in space and the relationship between events in time. The two semantic domains of *space* and *time* deserve special treatment for several reasons. First, though universal, space and time are constructed differently across languages. Buli exhibits an areal phenomenon of using body-part nouns (called 'relational nouns') to express the relationship between entities in space. The grammaticalisation of lexical items has attracted attention in lexical semantics, revealing interesting patterns and cross-linguistic tendencies about how grammatical systems evolve (see Heine & Kuteva 2007; Koptjevskaja-Tamm 2012). Time concepts are commonly expressed through temporal nouns and adverbial constructions, some of which have entered the Buli lexicon through borrowing. Some expressions regularly used to express time concepts are Akan, Arabic, and Hausa loanwords. Clock-time, now a global concept, is expressed periphrastically. Spatial and temporal relations therefore provide a valuable avenue for exploring shared linguistic features between Buli and its geographic neighbours.

The remaining sections are organised as follows: Section 8.2 describes the means of expressing spatial relations with relational nouns, while Section 8.3 discusses the means of expressing spatial relations with verbs. Section 8.4 examines the means of expressing temporal relations.

香港大學圖書館 HKU Libraries

8.2 Expressing spatial relations with nouns

Relational nouns are mostly body part nouns and other nominal expressions that modify nouns to specify the location of entities. Most of these relational nouns are not necessarily grammaticalised elements for expressing location. A few relational nouns, such as *pō* 'in', are fully grammaticalised expressions. *Pō* expresses location and has lost phonological material in its grammaticalisation process, so its morphological form is no longer identical with *póí* 'belly' from which it derives etymologically. A few others, such as *pítɛ̄ŋ* (?*póí* 'belly' + *tɛ̄ŋ* 'ground') 'bottom' and *nákpíák* (?*nɔ́í* 'mouth' + ?*kpíák* 'side') 'beside' are presently fossilised forms comprising unsegmentable expressions.

(533) *Tìim-mú* *ŋààŋ*
tree.9-DEF.9 back.5
'the tree's back/behind the tree.'

(534) *Kūsūŋ* *pō*
shelter in
'in a shelter (sp.).'

(535) *Bìmbì(ri)-ní* *pō*
cooking.pot.3-DEF.3 in
'in the cooking pot.'

香港大學圖書館 HKU Libraries

Table 39 provides a list of relational nouns in my corpus and some examples. Following the table are brief notes on the use of relational nouns.

Table 39: Relational nouns

Relational noun	Example
zúk 'head'	*bòòsūk zúk* grave.7 top.7 'on a grave'
pō 'in' *póí* 'belly'	*tùì(k)-ká pō* mortar.5-DEF.5 in 'in the mortar'
ŋààŋ 'back	*yé(ri)-ní ŋààŋ* house.3-DEF.3 back.5 'behind the house'
nɔ́í 'mouth'	*bē(li)-ní nɔ́í* river.3-DEF.3 mouth.3 edge of the river
nímbírí (pl. *nímbié)* 'eye-ball' *nínà* 'eyes' *níŋ 'face'* *bírí* 'seed'	*nyíá(m)-mú níŋ* water-DEF.9 face.5 'surface of the water'
sūnsūŋ 'middle, centre *sūnūm* 'heart'	*nú-(ba)-má sūnsūŋ* person-2-DEF.2 middle.5 'centre of the people.'
tēŋ 'ground'	*pùŋ-kú tēŋ* rock.7-DEF.7 ground.5 'beside the rock.'
kírí 'root (of a tree)'	*tììm-mú kírí* tree.9-DEF.9 root.3 'under the tree'
ŋmàì 'top'	*gúúk-kú ŋmàì* hill.7-DEF.7 top.3 'above the hill'
nyīŋ 'body/skin'	*síák-ká nyīŋ* wall.5-DEF.5 body.5 against the wall

香港大學圖書館 HKU Libraries

gēŋ ‘side’	*jùgà gēŋ* right.4 side ‘right side’
chīāk ‘waist’	*tàmpò-ní chīāk* rubbish.heap.3-DEF.3 waist.5 ‘bottom of the rubbish heap’
nákpíák ‘beside’ *nɔ́áí* ‘mouth’ *kpiak* ‘?side’	*yé(ri)-ní nákpíák* house.3-DEF.3 beside.5 ‘beside the house’
pítɛ̄ŋ base/bottom (of container) *pói* ‘belly’ + *tɛ̄ŋ* ‘ground’	*kɔ̄līn pítɛ̄ŋ* bottle bottom ‘bottom of bottle’

The corpus contains a few spatial nominals that are not body part terms. These include *sūnsūŋ* ‘middle/centre’ (probably related to *sūnūm* ‘heart’, < *sūī* ‘temper’ + *núm* ‘eyeball’), *ŋmàì* ‘top/up’, *tɛ̄ŋ* ‘ground/down’ (536)-(538).

(536) *Sàg-ní* *sūnsūŋ*
forest.3-DEF.3 middle.5
‘middle of the forest.’

(537) *Nídɔ̄-(ba)-má* *jùè* *ŋmàì*
man-2-DEF.2 climb.PFV up
‘The men climbed up.’

(538) *Nípō-(ba)-má* *sìŋ* *tɛ̄ŋ*
woman-2-DEF.2 descend.PFV ground.5
‘The women descended.’

香港大學圖書館 HKU Libraries

The spatial nouns *jùgà* ‘right’ and *gālā* ‘left’use the hands as reference frames (539)-(540)).

(539) *Nì* *vā* *jùgà.*
2PL follow right.4

‘Take right.’

(540) *Bà* *mɔ̄b* *gālā.*
CL.2 cross left.4

‘They should cross left.’

The nouns *kóríḱ* ‘east’ and *yé-níŋ* (‘house face’) ‘west’ also express spatial relations (541).

(541) *Bà* *nyìnì* *ká* *kóríḱ* *yàā* *yé-níŋ* *a?*
CL.2 come.from.PFV FOC east or west SP

‘Did they come from EAST or WEST.’

Some spatial nouns are normally used together. For example, *Ɔmàì* ‘up’ is usually used with *zúk* ‘head‘ (542) and *sūnsūŋ* ‘middle’ is usually used with *pō* ‘in’ (543). This sometimes imparts a nuanced meaning to the construction and accounts for the emergence of the fossilised form *pítɛ̄ŋ* ‘bottom’ and *nákpíák* ‘side’.

(542) *Wà* *píém-á-ŋá* *kàn* *jūērī* ***ŋmàì*** ***zúk***.
CL.1 arrow-4-DEF.4 NEG.IPFV climb up.3 top.7

‘His arrows do not go high up.’

(543) *Kàrīchì-(ba)-má* *bō* *tì* ***sūnsūŋ*** ***pō***
teacher-2-DEF.2 be.located 1PL middle in
ká=mā
FOC=PRED.EMPH

‘The teachers are in our midst.’

香港大學圖書館 HKU Libraries

Pō can be used together with its source noun ***póí*** ‘belly’ (544).

(544) *Tìì-mú* *sìŋ* *kà* ***pó-ní*** ***pō***.
medicine-DEF.2 descend.PFV CL.5 belly.3-DEF.3 in
‘The medicine went down its belly.’

The spatial nouns *gēŋ* ‘side’ and *nyīŋ* ‘body’ are commonly used interchangeably when they function as adpositons (545)-(547).

(545) *jùgà* *gēŋ*
right.4 side
‘right side.’

(546) *gālā* *nyīŋ*
left.4 side
‘left side.’

(547) *Wà* *chèŋ* *ká* *gālā* *gēŋ,* *bá* *mɛ̄* *chèŋ* *jùgà* *gēŋ.*
CL.1 go.PFV FOC left.4 side CL.2 also go.PFV right.4 side
‘He went to the LEFT SIDE; they also went to the RIGHT SIDE.’

香港大學圖書館 HKU Libraries

8.3 Expressing spatial relations with verbs

Spatial relations can be expressed by means of relational verbs that indicate the location of an entity relative to another entity. Posture verbs inherently code the orientation of entities, but posture verbs can be modified by adpositional phrases to express the position of an entity relative to another entity. The locative verb *bō* 'be located' can similarly be modified by adpositional phrases to code various kinds of spatial relations. Table 40 provides a list of verbs and the spatial relation and/or orientation they code.

Table 40: Relational verbs

Relational verb	Gloss	Figure-Ground relation
bō	be located	Generic spatial relation
gīlīm	surround	Figure encircles Ground
mɔ̄tī	be near to	Figure situated at a close distance away from Ground.
yālīmā	be far apart	Figure is situated in a distant location away from Ground.
kālī	'sit, be seated'	Figure is positioned on Ground
dɔ̄ā	'lie, lay'	Figure is positioned horizontally on Ground
zā	to stand, be standing	Figure is positioned vertically upright on Ground
sāŋī	to hang, be hanging	Figure is suspended over Ground
māŋī	to stick	Figure is in close contact with or fixed to Ground
sālī	to lean against	Figure is vertically in contact with Ground
tīīlī	lean against	Figure is vertically in contact with Ground
zūlī	to hang	Figure is suspended in air (over Ground)
dōmsī	to squat	Figure's body is crouched over Ground with support of knees
kōōrī	to bend down	Figure's body is crouched over Ground with support of knees
kpī dūnā (fix knees)	to kneel	Figure's knees are in firm contact with Ground

香港大學圖書館 HKU Libraries

The following sentences illustrate the use of relational verbs to express spatial relations.

(548) *Tógò* *bān-ní* *mɔ̀tì* *Aflao.*
PLACE border.3-DEF.3 be.near PLACE

'The Togo border is near Aflao.'

(549) *Dì* *sàŋ* *síák-ká* *nyīŋ.*
CL.3 hang wall.5-DEF.5 body

'It hangs against the wall.'

(550) *Tɔ̄m-mú* *kàlì* *ká* *kūtū-tā* *zúk.*
warband.9-DEF.9 sit.PFV FOC iron-8 top.7

'The warband sat on iron (rods).'

(551) *Kà* *bò* *tùìk-ká* *tɛ̄ŋ.*
CL.5 be.located mortar.5-DEF.5 ground.5

'It is beside the mortar.'

香港大學圖書館 HKU Libraries

8.4 Expressing temporal relations

Relations in time are expressed by means of temporal nouns, of which some are loanwords. Table 41 provides a list of temporal nouns and other expressions commonly used to express relations in time. Following the table are brief notes on the temporal relations markers and sentence examples with a few of them.

Table 41: Temporal nouns

Relational noun	**Gloss**	**Notes**
jīnlá	today	
chūm	tomorrow	
vɔ̀nùk	day after tomorrow	
dàām	few days before yesterday	
dìēm	yesterday	
bèn	year	
sàlùúk	morning	
àgbá	noon (midday)	
wéntùèŋ (variant: *kántùèŋ*)	afternoon	*wén* 'sky', *tūēŋī* 'open up'
jùnɔ̀ī	evening	
yōk	night	*yōk* can be repeated to signify 'deep night'
vànùɔ̄k	dawn	
dììm	last year	
dōnlá	this year	

香港大學圖書館 HKU Libraries

wén kārīk	dry season	'the presence/'sitting' of the sun' January, February, March, April, May
yùēī (wén)	wet, rainy season	June, July, August
kpìāk (wén)	harvesting season	September, October
bōrīká (wén)	planting season	*bōrī* 'plant' and *ká* 'NMLZ' May, June, July
chēká (wén)	harvesting season	*chē* 'cut' and *ká* 'NMLZ' October, November, December
kɔ́m wén	hunger season	*kɔ́m* 'hunger', *wén* 'sky' June, July
wūlīm wén	sweaty season	*wūlīm* 'sweat', *wén* 'sky'' January, February, March, April, May
fíɔ́k wén	bountiful harvest season	December
dípō~dílápō	former times	*Dípō* can be repeated to signify 'long-gone period'

Temporal nouns such as *jīnlá* 'today', *dièm* 'yesterday', *dàām* 'recent days before yesterday', *chūm* 'tomorrow', *vɔ̀nùk* 'day after tomorrow', *dììm* 'last year', *dōnlá* 'this year' express various periods in time.

(552) *Jínlā* *lī* *bà* *nyà* *pāgrīm.*
today FOC CL.2 get.PFV strength
'They gained strength (recovered) today.'

香港大學圖書館 HKU Libraries

Dāī ‘day’, *chíík* ‘month’, *bèn* ‘year’ and the Hausa loanword *bákɔ̀ì* ‘week’ refer to express time cycles.

(553) *Kpāg-(sa)-ŋá* *jàm* *ká* *bákɔ̀(ri)-ní* *dé.*
leader-6-DEF.4 come.PFV FOC week.3-DEF.3 this
‘The leaders came this week.’

Sàlùúk ‘morning’, *wéntùèŋ* ‘afternoon’, *àgbá* ‘noon’, *jùnɔ̀ī* ‘evening’, *yōk* ‘night’, and *vànùɔ̄k* ‘dawn’ express different time periods of a day.

(554) *Bà* *à* *tōm* *ká* *dí-lá,* *wéntùèŋ* *mìèná.*
CL.2 IPFV work FOC CL.3-DIST afternoon.5 all
‘They work like that, every afternoon.’

Seasonal expressions such as *bōrīká (wén)* ‘planting season’, *wén kārīk* ‘dry season’, *yùēī* (*wén*) ‘wet/rainy season’, *kpìāk* (*wén*) ‘harvesting season’ *chēká (wén)* harvesting season’ *kɔ́m wén* ‘hunger season’, *wūlīm wén* ‘sweaty season’ and *fíɔ́k wén* ‘bountiful season’ express different time periods in an agricultural year and reflect different weather patterns.

(555) *Tì* *à* *kūm* *kūūn-ā* *ká* *wén-kārīk.*
1PL IPFV mourn funeral-4 FOC dry.seasaon.5
‘We mourn the dead in the dry season.’

The expressions *dílápō* and *dípō* denotes a long period in the past. *Dípō* can be repeated for emphasis to indicate a very long or late period in the past (556).

(556) *Dípō-dípō* *kūtūk* *wùsùm pòòm* *kā.*
former.times iron horse PST not.exist
‘In former time, there was no bicycle.’

香港大學圖書館 HKU Libraries

A few time concepts are expressed by means of periphrasis, for example *dàām-pà-tɛ̀-dièm* 'day before yesterday'.

(557)	*Tìì-tà-ŋá*	*jàm*	*pààrì*	*ká*	*dàām-pà-tɛ̀-dièm.*
	medicine-8-DEF.4	come.PFV	reach.PFV	FOC	three.days.ago

'The medicines arrived three days ago.'

Clock-time is expressed by means of the periphrasis constructions such as *Kù nàg bāŋ bùyè* 'it has struck two' (2 o'clock'). *Bāŋ* is originaly an ideophone that depicts the sound of striking, but its meaning has been extended to 'clock' and 'wristwatch'. *Bāŋ* 'wristwatch' exists alongside the Hausa loanword *gōgō* 'wristwatch' and the English loan *tām* 'time'.

Expressions such as *bāŋ bùyè* '2 o'clock' and *bàŋ bùnù* '5 o'clock' denote times that fall on exactly the hour. The concept 'minute' is expressed with the expression *míítá* 'ropes' (most likely error transfer of English 'minutes'). The phrase *Kù nàg* … 'it has struck…' introduces clock-time, as in *Kù nàg bàŋ bùyè* 'It is 2 o'clock'. Reading minutes to the hour is done by combining this expression with *wùsì*[27] *míítà* 'in excess of …'.

(558)	*Kù*	*nàg*	*bāŋ*	*bù-nyī*	*à*
	CL.7	strike.PFV	watch	CL.9-one	SC
	wùsì	*míí-tá*	*pī-sìtà-lì-wànyī*		
	exceed.PFV	minute-8	thirty-one		

'It is one thirty-one.'

(559)	*Bà*	*à*	*yītī*	*ká*	*bāŋ*	*bù-tà.*
	CL.2	IPFV	wake.up	FOC	hour	CL.9-three

'They wake up at 3 o'clock.'

[27] Related to *wūsī* 'to bark'

Day names are Arabic expressions that have entered Buli through Hausa. These expressions are composed of an Hausa word followed by *dāī* 'day'. The Akan loanword *búrínyà* 'christmas' entered Buli due to Christianisation. Table 42 is a list of some loaned temporal nouns. Following the table are sentences exemplifying the use of loaned temporal nouns.

Table 42: Loaned temporal nouns

Day	**Gloss**	**Literal meaning**
àtàní dāī	Monday	'Atani day' (Arabic)
àtàlátà dāī	Tuesday	'Atalata day' (Arabic)
àlàrìbá dāī	Wednesday	'Alariba day' (Arabic)
Àlàmísì dāī	Thursday	'Alamisi day' (Arabic)
Àzúmà dāī	Friday	'Azuma day' (Arabic)
Àsíbí dāī	Saturday	'Asibi day' (Arabic)
Àláádì dāī	Sunday	'Alaadi day' (Arabic)
Búrínyà	Christmas	'Christmas' (Akan: *búrónyà*)
bákɔ̀ì	week	(Hausa loanword)

香港大學圖書館 HKU Libraries

The following sentences illustrate the use of *Àsíbí dāī* ‘Saturday’, *bákɔ̀ì* ‘week’, and *búrínyà* ‘Christmas’

(560) *Jínlā* *ká* *Àsíbí* *dāī.*
today FOC NAME day.3
‘Today is SATURDAY.’

(561) *Búrínyà-wá* *tì* *lì* *gù* *ànààb* *mɛ̄.*
christmas-DEF.1 1PL FUT bury NAME also
‘We will bury Anaab also during Christmas.’

(562) *Bákɔ̀ì* *mìèná* *tì* *à* *ŋ̀ōōnī* *nú-bá* *ká=mā.*
week.3 all 1PL IPFV screen person-2 FOC=PRED.EMPH
‘Every week, we screen people.’

香港大學圖書館 HKU Libraries

9 Multiverb constructions

9.1 Introduction

The term "multiverb construction" (MVC) is used in this thesis as a cover term to describe various verb sequences or verb series that complement each other to express different facets of a complex situation. Multiverb constructions differ from complex sentences, which are comprised of linked clauses that express different kinds of relations. However, superficially, Buli multiverb constructions have formal properties that resemble complex sentences. Multiverb constructions also have different formal and functional types with further subdivisions.

This chapter focuses on the commonest MVCs in my corpus, namely serial verb constructions (SVC). First, I provide some general observations about the morpho-syntactic similarities between SVCs and complex sentences (§ 9.2). Section 9.3 presents an overview of Buli serial verb constructions. Following this section is a description of four morpho-syntactic properties of Buli SVCs, namely argument sharing (§ 9.4.1), same tense, aspect, and mood values (§ 9.4.2), and same negation marking (§ 9.4.3). Section 9.5 describes five functional types of Buli SVCs, namely motion–direction SVCs (§ 9.5.1), motion–action SVCs (§ 9.5.2), participant-introducing SVCs (§ 9.5.3), adverbial SVCs (§ 9.5.4), and time-aspect SVCs (§ 9.5.5). Section 9.6 discusses consecutive and non-consecutive SVCs, two special types of SVCs.

香港大學圖書館 HKU Libraries

9.2 General observations: SVCs versus Complex sentences

Some complex sentences have similar morphosyntactic properties as SVCs. This is because, in spontaneous discourse, like-elements and connectives of bi-clausal constructions are often omitted. Compare each pair of sentences in (563)-(566)

(563) a.

Wà	*yìtì*	(*àlīgè*	*wà*)	*àn*	*pùùsí*	*mí.*
CL.1	wake.up.PFV	but	CL.1	NEG.PFV	greet	1SG

'He woke up, but he did not greet me.'

b.

Wà	*yìtì*	*àn*	*pùùsí*	*mí.*
CL.1	wake.up	NEG.PFV	greet	1SG

'He woke up, but he did not greet me.'

(564) a.

Wà	*nyà*	(*àyén*)	*wà*	*kààsì*	*tɛ̄ŋ-sā*	*míéná.*
CL.1	see.PFV	QUOT	CL.1	destroy.PFV	land-6	all

'He noticed that he had destroyed every town.'

b.

Wà	*nyà*	*wà*	*kààsì*	*tɛ̄ŋ-sā*	*míéná.*
CL.1	see.PFV	CL.1	destroy.PFV	land-6	all

'He noticed that he destroyed every town.'

香港大學圖書館 HKU Libraries

(565) a. *Wà* *tɛ̀* (*tì*) *Dàgbàn-má* *nàm.*
CL.1 make.PFV CONN NAME.2-DEF.2 suffer.PFV
'He made the Dagombas suffer.'

b. *Wà* *tɛ̀* *Dàgbàn-má* *nàm.*
CL.1 make.PFV NAME.2-DEF.2 suffer.PFV
'He made the Dagombas suffer.'

(566) a. *Wà* *bìisì* (*tì* *kù*) *nìàg.*
CL.1 speak.PFV CONN CL.7 be.well
'He spoke well.'

b. *Wà* *bìisì* *nìàg.*
CL.1 speak.PFV be.well
'He spoke well.'

As seen in (563), the coordinator *àlīgè* and the resumptive pronoun *wà* can be omitted, leaving a single subject in complex construction. Similarly, as (564) shows, a complementiser can be omitted so that a bi-clausal construction resembles a serial verb construction. Examples (565) and (566) are also common in spontaneous discourse. When clausal connectives are omitted, prosodic changes sometimes occur in the verbs preceding them and the entire construction. I did not investigate the prosodic properties of SVCs and complex sentences, but they are expected to show relevant differences. Complex sentences whose elements are omitted have distinct prosodic properties from SVCs.

Tone also plays a crucial role in determining the nature of a situation or event expressed in SVCs. Differential marking of tense, aspect, and mood categories is sometimes achieved by means of tone (together with free grammatical morphemes). The following sentences illustrate the function of tone in Buli SVCs. Compare each pair of sentences in (567) and (568). Only tone marks grammatical function in (567)b. and (568)b., while in (567)a. and (568)a. tone is used together with the imperfective marker *á*.

香港大學圖書館 HKU Libraries

(567) a. *Tì* *sē* *lām* *á* *ŋɔ̄b.*
1PL roast meat IPFV chew
'Let's be roasting and chewing meat.'

b. *Ti* *sē* *lām* *ŋɔ̀b.*
CL.2 roast meat chew
'Let's roast meat and chew it.'

(568) a. *Bà* *sè* *lām* *á* *ŋɔ̄b.*
CL.2 roast.PFV meat IPFV chew
'The roasted meat and are chewing it.'

b. *Ti* *sè* *lām* *ŋɔ̀b.*
1PL roast.PFV meat chew
'We roasted meat and chewed it.'

The observations above show that a detailed investigation into Buli SVCs will have to consider grammatical tone and other prosodic properties of SVCs. In the following sections, I provide an overview of some of the salient features of Buli SVCs.

9.3 Overview of Buli serial verb constructions

I consider an SVC to be a series of verbs that constitutes a syntactic unit, with each verb contributing a facet of meaning or function to the overall interpretation of the construction. Buli SVCs show some cross-linguistically attested properties of SVCs in the typological literature (e.g. Aikhenvald 2006; Aikhenvald & Dixon 2006; Ameka 2001; Durie 1997; Lord 1993), but there are notable Buli-specific features highlighted in the following paragraphs. I use the labels V1 for first, V2 for second verb to refer to verbs according to their position in the SVC.

Buli SVCs conform with some core morpho-syntactic features, such as single argument sharing, sameness in tense, aspect, mood, negation, and illocution values.

香港大學圖書館 HKU Libraries

a) Serial verbs share at least a single subject argument, but these verbs may have separate object arguments. The subject argument is usually explicitly expressed, except in second-person imperatives.
b) Object arguments in SVCs may be expressed explicitly or omitted.
c) Grammatical morphemes such as *lì* 'FUT' and *à* 'IPFV' are expressed once in SVCs.
d) The verbs may fall under the same grammatical category. Some grammatical markers precede V1 and have scope over all verbs following it; others occur between the verbs. The imperfective marker sometimes occurs between the verbs. In Perfective SVCs, the verbs typically bear low tones without additional marking. Similarly, tone is the core means of marking Imperative SVCs; V1 bears Mid tone, whereas V2 bears low tone.
e) Buli serial verbs may express a simple event or a complex event. One of the two verbs may modify the meaning of the other – e.g. by indicating the manner in which an activity denoted by the verb is performed, or fulfil grammatical functions such as marking tense, aspect, or mood on the other verb. Each of the verbs forming part of an SVC may express a (sub-)event in a successive or simultaneous temporal sequence. If an SVC expresses a complex event, the verbs may be linked with a serial connective. This serial connector is mostly found in the consecutive SVC, which expresses a complex event using multiple verbs.

9.4 Morpho-syntactic properties of Buli SVCs

9.4.1 Argument sharing

As in many serializing languages, Buli SVCs share a single grammatical subject which is understood to be the sole actor. For example, the verbs *chàlì* and *jàm* in (569) share the subject *bà*. Although the two verbs express different events, *bà* cannot be repeated.

香港大學圖書館 HKU Libraries

(569) *Bà* ***chàlì*** ***jàm*** *Sándēm* *nàà(b)-wá*
CL.2 run.PFV come.PFV PLACE chief.1-DEF.1
jìg-ní.
place.3-DEF.3
'They ran to the Sandema chief's place.'

Object sharing is optional in some serial verbs, as (570)a. illustrates. The object *nú-bálá* 'those people' is shared by the verbs *tɔ̀m* 'shot' and *kò* 'killed' in this SVC. This object can be expressed as a resumptive pronoun (570)b. V1 and V2 of a SVC may have separate objects as in (571) where the object of *pà* 'take' is *yām* 'sense', while the object of *yìg* 'captured' is *nídɔ̄-má* 'the men'.

(570) a. *Bábátù* *tɔ̀m* *nú-(ba)* *bá-lá* *kò.*
NAME shoot.PFV person-2 CL.2-DIST kill.PFV
'They shot and killed those people.'

b. *Bábátù* *tɔ̀m* *nú-(ba)* *bá-lá* *kò* *bá.*
NAME shoot.PFV person-2 CL.2-DIST kill.PFV 3PL
'Babatu shot and killed a lot of those people.'

(571) *Wà* *pà* *yām* *yìg* *nídɔ̄-(ba)-má.*
CL.1 take sense capture man-2-DEF.2
'He captured the people with his intellect.'

香港大學圖書館 HKU Libraries

9.4.2 Same tense, aspect, and mood values

Buli SVCs conform in many respects to the criterion of sameness in aspect value. As shown in (572) and (573), the tense markers *lì* 'FUT' *pòòm* 'RC.PST' are expressed once. These grammatical morphemes precede V1 in SVCs and have scope over subsequent verbs. To mark Imperfective, the imperfective marker *à* occurs with a high tone between the verbs, whereas V1 and V2 usually occur with L and M tones respectively (574).

(572) *Tì* *lì* *ŋōōnī* *nú-(ba)-má* *nyà*
1PL FUT screen person-2-DEF.2 see
'We will screen the people for evaluation.'

(573) *Sì* *pòòm* *chàli* *jò* *ká* *sàg-ní* *pō*
1PL RC.PST run.PFV enter FOC forest-DEF.3 in
'They (cattle) ran into the forest.'

(574) *Kpíín-á-ŋá* *yìtì* *á* *jō* *tùì-sà-ŋá* *pō.*
guinea.fowl-4-DEF.4 fly IPFV enter baobab-6-DEF.4 in
'The guinea fowls flew, entering the baobab trees.'

A notable particularity in aspect and mood marking is the use of tone. Serial verbs typically occur with a low tone to mark the Perfective aspect (575). In Imperative SVCs, V1 takes a mid-tone, while V2 takes a low tone (576).

(575) *Dìēm* *lī* *mí* *gà* *nyà* *àdànlíé-wá.*
yesterday FOC 1SG go.PFV see NAME-DEF.1
'I visited the Adanlie yesterday.'

(576) *Chēŋ* *bè.*
go be.lost
'Get lost!'

香港大學圖書館 HKU Libraries

9.4.3 Same negation marking

In negative SVCs, the negative morphemes *àn* and *kàn* always precede V1. The only negative morpheme preceding V1 has scope over subsequent verbs.

(577) *Nú(ri)* *wá-lá* *àn* *jām* *pàárì* *Sándēm.*
person.1 CL.1-DIST NEG.PFV come reach PLACE
'That person did not reach Sandema.'

(578) *Fì* *kàn* *kpīīrī* *á* *nyō* *jèn-tà-ŋá* *pō*
2SG NEG.IPFV pour IPFV put.into soup-8-DEF.4 in
'You do not pour it into the soup.'

香港大學圖書館 HKU Libraries

9.5 Functional types of Buli SVCs

This section focuses on the facets of meaning and grammatical functions of verbs that constitute each functional type of SVC. Buli serial verbs express one of these relations:

a) Spatial relation: V1 expresses motion whereas V2 expresses the direction of the motion.
b) Motion-to-purpose relation: V1 expresses motion whereas V2 expresses the purpose, effect, or result of the motion.
c) Benefaction relation: V1 expresses an activity whereas V2 introduces a benefactor or recipient of the activity.
d) Comparative relation: V1 expresses a quality or action associated with the subject, while V2 indicates the extent to which the same action or quality differs within the object of V2.
e) Acquisition-action relation: V1 expresses a process of acquisition, whereas V2 expresses the utility of the acquired entity or an effect on the acquired entity
f) Time, aspect, or manner relation: one of the verbs serves a grammatical function of indicating the time an action was performed, a phase of an action, or the manner in which an action was performed.

Serial verbs that express these relations vary, and the same series of verbs may have varied functions. Below, I discuss the five functional types of SVCs that occur in my corpus and have been reported cross-linguistically.

香港大學圖書館 HKU Libraries

9.5.1 Motion-direction SVC

Motion-direction SVCs involve two motion verbs. Verbs occupying the V1 slot denote manner of motion but not direction, e.g. *chālī* 'run', *yītī* 'fly', and *kūūrī* 'crawl'. The V2 slot is occupied by verbs that contribute direction to the motion denoted by V1, e.g. *chɛ̄ŋ* 'go', *jō* 'enter', *jām* 'come', *sīŋ* 'descend', *jūērī* 'climb', *nyīnī* 'come/go out', *pāārī* 'reach'). Sentence (579) illustrates a motion-direction SVC.

(579) *Wììlì-sà-ŋá* ***chàlì*** ***jàm*** *ká* *Sándēm*
NAME-6-DEF.4 run.PFV come FOC PLACE
'The Kasena (people) also ran to Sandema.'

The verb *gā* 'go' has an andative use in motion-direction SVCs where it occurs after a manner of motion verb. In such contexts, V1 indicates the way or mode of motion, whereas V2 indicates the extent or act of distancing from a speaker or reference point ((580)-(581)).

(580) *Bà* ***vùùrì*** ***gà*** *ŋàáŋ*.
CL.2 crawl go back
'They crawled backwards.'

(581) *Nì* ***chɛ̄ŋ*** ***gà*** *níŋ.*
2PL walk.go go face
'You (pl.) Go away'

香港大學圖書館 HKU Libraries

9.5.2 Motion-action SVC

A motion-action SVC has a general motion verb in its V1 slot and a dynamic non-motion verb in its V2 slot (582)-(583). Serial verbs in this construction express the idea that the motion denoted by V1 leads to an action or state expressed by V2.

(582) *Wà* *jàm* *bò* *lì* *ká* *nààb* *Àbúkárí.*
CL.1 come.PFV stay with FOC chief NAME
'They came and stayed with chief Abukari.'

(583) *Bábátù* ***gà*** ***kààsì*** *tɛ̀ŋ-(sa)* *sì-lá*
NAME go destroy land-6 CL.6-DIST
mɛ̄ *ká=mā*
also FOC=PRED.EMPH
'Babatu went and destroyed those lands also.'

To specify the manner of motion, Buli speakers commonly use a series of three verbs – a manner of motion verb followed by *gā* 'go', before the action or state verb.

(584) *Bà* ***chɛ̀ŋ*** ***gà*** ***yìg*** *Sàbóbá* *nú-(ba)-má.*
CL.2 walk.go.PFV go capture PLACE person-2-DEF.2
'They went and captured the people of Saboba.'

(585) *Tì* ***lì*** ***jūērī*** ***gúúk-kú*** ***gà*** ***nyà*** *tàngbàn-ní*
CL.2 FUT climb hill.7-DEF.6 go see earthshrine.3-DEF.3
'We will climb up the hill to visit the earthshrine.'

香港大學圖書館 HKU Libraries

9.5.3 Participant-introducing SVC

I subsume two types of SVCs, known by various names such as *dative, benefactive, instrumental*, or simply 'give,' 'take,' or 'hold' SVCs, and comparative SVCs, under the category of participant-introducing SVCs. The verbs *tɛ̄* 'give', *pā* 'take' and *tā* 'hold' are the core elements of participant-introducing SVCs. The comparative SVC is, however, a subtype that requires the verb *gāām* 'cross, surpass'.

A participant-introducing SVC involving *tɛ̄* 'give' is used when a beneficiary of an activity needs to be specified. V1 is usually an activity verb requiring an object (Theme) to be transferred to another object (Benefactive). As (586) and (587) show, the benefactive argument functions as an object of V2 and is introduced with *tɛ̄* 'give'. If an entity under transfer is a material entity in the possession of the subject, the verb *pā* usually occupies the V1 slot (587).

(586) *Àchám* *lī* *pùùsì* *wén* *tɛ̄* *Bùlùk.*
NAME FOC pray.PFV god.3 give PLACE
'Acham prayed for Buluk.'

(587) *Bà* *pà* *lìg(ra)* *mɔ̀n-tà* *tɛ̀* *tí.*
CL.2 take.PFV money.4 red-8 give 1PL
'They gave us gold.'

Another type of participant-introducing SVC involves the verbs *pā* 'take' or *tā* 'hold, grab'. In this SVC, *pā* 'take' and *tā* 'hold, grab' occupies the V1 slot to introduce an entity in a subject's possession (588) and (589). This entity is typically an instrument or a tool (concrete or abstract) by means of which a task is accomplished. The V2 slot is occupied by a verb that describes the task accomplished with the instrument or tool. Less frequently, other verbs, such as *nyā* 'get' occupy the V1 slot (590).

香港大學圖書館 HKU Libraries

(588) *Mí* *pā* *zá-á* *mànì* *sāāb.*
1SG take millet-4 prepare NAME.9

'I used millet to prepare *saab*.'

(589) *Wà* ***tà*** *ká* *wùsùm-à* *lì* *kànbòŋ* *dàà-tà*
CL.1 hold.PFV FOC horse-4 and foreigner.5 stick-8
à *kpàlìm.*
IPFV fight

'He used horses and rifles to fight.'

(590) *Wà* *àn* *nyā* *kpīāk* *sɛ̀* *bɔ̀glù-kú.*
CL.1 NEG.PFV get chicken.5 build shrine-DEF.7

'He did not get a chicken to appease the shrine.'

A final point to note is that not all *pā* 'take' and *tā* 'hold, grab' SVCs introduce participants. The V2 may be intransitive (591)-(592). In this case, a transitive V1 takes an object that describes the situation of the subject or indicates an entity in the subject's possession. V2 may express an outcome, effect, or result of the object's situation.

(591) *Mí* *pā* *bá* *bàsì* *ká=mā.*
1SG take CL.2 leave.PFV FOC=PRED.EMPH

'I have left them.'

(592) *Bà* *tà-á* *níníg-á* *kpì.*
CL.2 hold.PFV-FOC pity-4 die

'They died in pity.'

香港大學圖書館 HKU Libraries

Comparative SVCs also add participants (593)-(594). The V1 of a comparative SVC expresses an activity or a state/quality. V2 introduces an object that engages in the same activity or possesses the same qualities as the subject and serves as the standard for comparison.

(593) *Àyíétá* ***tɔ̀m*** ***gààm*** *kànbòŋ-sà-ŋá* *ká=mā.*
Ayieta shoot.PFV surpass foreigner-6-DEF.4 FOC=PRED.EMPH
'Ayieta shot (arrows) better than the foreigners.'

(594) *Ɔmán-á-ŋá* *dé* ***sāālā*** ***gààm*** *ǹ-ŋà-lá*
okro-4-DEF.4 these be.slimy surpass CONTR-CL.4-DIST
'These okras are slimier than those.'

The comparative SVC is widespread among serialising African languages, especially languages of the Macro-Sudan area (Güldemann 2008), as well as in Afro-Caribbean English-lexifier Creoles on both sides of the Atlantic (see Yakpo 2019). In all these languages, equivalents of the verb 'surpass' feature prominently in all kinds of comparison (e.g. appearance, age, colour, etc.), usually occupying the V2 position.

9.5.4 Adverbial SVC

In adverbial SVCs, one of the verbs modifies a verb that expresses an activity (595)-(598).V1 expresses the situation of the subject, while V2 expresses the outcome of the situation. In some cases, (as in (597) and (598)), V2 indicates certain temporal and manner aspects of the activity that V1 expresses.

香港大學圖書館 HKU Libraries

(595) *Dàgbà-má* *tòm* *jìàg* *ká=mā.*
NAME-DEF.2 work be.tired FOC=PRED.EMPH

'The Dagomba (people) got tired working.'

(596) *Tì* *kpāg-ní* *bììsì* *màgsì* *ká=mā.*
1PL elder.3-DEF.3 speak.PFV be.well FOC=PRED.EMPH

'Our elder spoke well.'

(597) *Ɗārī* *nyá-túílík* *sùèrì* *chìn.*
fetch water.9-hot.5 be.full calabash.3

'Fetch a calabash full of hot water.'

(598) *Bà* *lìmsì* *bènì.*
CL.2 wait.PFV be.long

'They waited for long (time).'

The V1 of an adverbial SVC may convey an adverbial meaning (599)(600). Typically, the verbs *pīlīm, ŋmān* 'return', which indicate repetitiveness or specific verbs denoting manner occupy the V1 slot. The verb in the V2 slot expresses an activity.

(599) *Wà* *tɔ̄m-mú* *àn* *ŋmān* *jàm* *dé.*
CL.1. warband.9-DEF.9 NEG.PFV return come here

'His warband did not come here again.'

(600) *Wà* *wàlìsì* *yìg* *tì* *pō-(ba)-má* *gēlā.*
CL.2 work.tirelessly capture.PFV 1PL wife-2-DEF.2 some

'He, tirelessly, captured some of our wives.'

香港大學圖書館 HKU Libraries

9.5.5 Time–Aspect SVC

In time–aspect SVCs, one of the verbs is grammaticalised so its original lexical interpretation does not apply. Such verbs serve as grammatical morphemes for marking tense and aspects of other verbs. For example, *nūērī* 'finish' indicates Completive aspect in (601).

(601) *Tì* *tèb* *bá-lá* *nùèrì.*
1PL treat.PFV CL.2-DIST finish
'We have finished treating those (people).'

Two special SVCs feature the verbs *gā 'go', zā* 'stand', and *nyā*. In a construction like (602) *zā* marks the inception of an event. It indicates that the rainfall occurred immediately the shrine accepted an offering.

(602) *Bɔ̀glùk-kú* *lī* *sìàg* *lá,* *ŋmɔ̀rùk-kú*
shrine.7-DEF.7 SUB agree.PFV CDM rain.7-DEF.7
zā *á* *nī.*
stand IPFV to.rain
'When the shrine accepted (the plea), it started raining.'

Time relations can also be expressed by means of a 'go–reach' SVC. Sentence (603) illustrates a 'go–reach' SVC that expresses an 'until' relation. This construction codes the passing of time into a particular period.

(603) *Bà* *tà=á* *dí-lá* *gà* *pààrì* *jùnɔ̀ī.*
CL.2 hold.PFV=FOC CL.3-DIST go reach evening
'They held on until evening.'

香港大學圖書館 HKU Libraries

9.6 Consecutive and Non-consecutive SVCs

Consecutive serial verb constructions (CSVC) and Non-Consecutive serial verb constructions (NCSVC) consist of two or more verbs linked to express subevents of a complex situation.

The verbs constituting a CSVC are always arranged in an iconic order, according to the chronological order of their events. These constructions are similar to those referred to as "consecutives" and "coordinate or linking SVCs" in Fe$^{?}$fe$^{?}$, Akan, Yoruba, Nupe, and Mooré (cf. Hyman 1971; Bamgbose 1982; Carlson 1994; Osam 2003; Schiller 1991). As can be seen in (604) and (605), the serial connector of a CSVC is optional and the verbs express a past situation.

(604) *Tì* *sè* *(à)* *ŋɔ̀b.*
1PL roast.PFV SC chew
'We roasted and chew.'

(605) *Bà* *nàg* *(à)* *dè.*
CL.2 play.PFV SC win
'They played and won.'

By contrast, NSVCs do not express chronological order events. Both verbs may express events that take place concomitantly or simultaneously (606). V1 may describe a state (607) or provide a context (608) in which the event of V2 occurs.

香港大學圖書館 HKU Libraries

(606) *Àjɔ̀ŋ* *chɛ̀ŋ* *á* *lō.*
NAME walk IPFV fall
'Ajong is tripping repeatedly while walking.'

(607) *Bà* *kàlì* *á* *kūm.*
CL.2 sit IPFV cry
'They sits crying .'

(608) *Àkúsúŋ* *gɔ̀à* *á* *sām.*
NAME sleep IPFV urinate
'Akusung urinates while asleep.' / 'Akusung bedwets.'

Both types of constructions are commonly used in narratives and commentaries, where several verbs are strung to express interrelated events.

(609) *Bà* *bá-í* *à* *kùm* *à* *nàm,*
CL.2 CL.2-REL SC cry SC struggle
à *kpì.*
SC die
'Some of them cried, struggled, and died.'

(610) *(...)* *àtì* *fì* *á* *pōlīm* *á* *chāārī* *lì* *nyìám* *á*
CONN 2SG IPFV stir IPFV mix.rapidly with water.9 IPFV
mānī *bú* *ǹwūlī.*
stir CL.9 quickly
'… and you keep stirring, adding water rapidly, and kneading it quickly.'
'

香港大學圖書館 HKU Libraries

10 Interclausal relations

10.1 Introduction

Clauses can be combined into complex sentences to indicate various semantic relations between events. This relationship is created by linking the clauses with coordinators, subordinators, and other connectives. Although few, connectives link clauses of different semantic contents and sequence to derive a range of semantic relations. The syntactic positions of connectives in complex sentences tend to be fixed. Also, re-arranging the order of clauses can bring about a change in semantic relations, result in meaning distortions, or even create unacceptable sentences.

The remaining sections are organised as follows. Section 10.2 summarises the connectives in my corpus and their semantic relations. Following this is a discussion on adverbial clauses (§ 10.3) subdivided as follows: time-clauses with *lī* and *lá* (§ 10.3.1), time-clauses with *dàn* (§ 10.3.2), conditional-clauses with *dàn* (§ 10.3.3), manner-clauses with *àsī* (§ 10.3.4), negative conditional (apprehensive) clauses with *sēkā* (§ 10.3.5), purpose clauses with *àyén* (§ 10.3.6) and *àtì*-adverbial clauses (§ 10.3.7). Section 10.4 discusses four main types of coordination: conjunctive coordination with *àlì* (§ 10.4.1), disjunctive coordination with *kóó* and *yàā(sī)* (§ 10.4.2), adversative coordination with *àlīgè* and *àmāā* (§ 10.4.3), and parataxis (covert coordination) (§ 10.4.4). Section 10.5 discusses reported speech and thought, including a brief description of two attention getters *nāā* and *wāā* that are usually used in reported discourse (§ 10.5.1).

香港大學圖書館 HKU Libraries

10.2 Connectives and their semantic relations

Table 43 summarises the connectives in my corpus. The second column indicates the common linking strategies applicable to the connectives. Deletion of like-elements (equi-deletion) usually applies to the second clause in coordinate sentences. The third column of the table indicates the semantic relations/implications associated with the connectives.

Table 43: Connectives, linking strategies, and semantic implications

Connectives	Linking strategy	Semantic relation
Subordinator: *lī*,	Subordination	Various relations
dàn	Subordination	condition, temporal
sēkā	Subordination	condition
àsī	Subordination	comparison, manner
àyén	Subordination	purpose, reason
clausal determiner: *lá*	Subordination	determination
àtì	Coordination	cause, purpose, condition, reason, effect, result
lì	Coordination (equi-deletion)	Temporal sequence (simultaneous)
àlīgè ~ gē	Coordination (equi-deletion)	adversative, contrast, temporal sequence
àmāā	Coordination (equi-deletion)	adversative, contrast
yàā(sī)	Coordination (equi-deletion)	disjunctive, alternative
kóó	Coordination (equi-deletion)	disjunctive, alternative
yāā	Coordination (equi-deletion)	Temporal sequence

香港大學圖書館 HKU Libraries

10.3 **Adverbial clauses**

Adverbial clauses hypotactically depend on the main clause for their interpretation without being embedded in the main. They mainly situate events in time and/or location, describe the manner in which events occur, or give conditions, reasons, or justifications for the occurrence of events. The core devices for indicating these relations are the adverbializers *dàn* and *lī*. *Lá* functions as a clausal determiner, occurring as the final element in some adverbial clauses.

10.3.1 Time clauses with *lī* and *lá*

'When'-clauses is expressed by means of the subordinator *lī* and the clausal determiner *lá*, and the conditional marker *dàn*. As (611) illustrates, the adverbial clause always precedes the main clause. The adverbial and the main clauses express two separate events which occurred in the past. The event in the adverbial clause establishes the specific time in which the event in the main clause occurred. The event in the main clause can be construed as a condition or circumstance that triggered the event in the second clause.

(611) *Kpālīŋ-ká* *lī* *yɔ̀gì* *lá,*
battle.5-DEF.5 SUB cool.down.PFV CDM
bà *mìèná* *wààŋ.*
CL.2 all scatter.PFV
'When the battle cooled down, they all scattered.'

香港大學圖書館 HKU Libraries

The temporal relation between the adverbial clause and the main clause may be simultaneous. In (612) the event in the clause overlaps temporally with the event in the adverbial clause.

(612) *Bà* *lī* *á* *bīīsī* *lá,*
CL.2 SUB IPFV speak CDM
tàmá *àn* *sīāg* *yà.*
1PL.INCL NEG.PFV agree PRF
'While they were speaking, we did not assent to it.'

The event in the main clause can take temporal precedence over the event in the adverbial clause. In (613), the event in the adverbial clause occurs before the event in the main clause. This is expressed through Perfective marking in the adverbial clause and Past Progressive marking in the main clause.

(613) *Tūēm-mú* *lī* *yìtì* *lá,*
disease.9-DEF.9 SUB rise.PFV CDM
tì *pòòm* *bò=á* *gōmsī* *ká* *wíé.*
1PL RC.PST be.located=IPFV address FOC issue.4
'When the disease broke out, we were addressing [national] issues.'

Differential marking in tense, aspect, and mood categories is also seen in the following examples. In (614), the event in the main clause has been completed, while the event in the adverbial is ongoing. Similarly, in (615) the event in the adverbial clause is ongoing, while the event in the main clause is expected to occur at a future time.

香港大學圖書館 HKU Libraries

(614) *Mí* *lī* *á* *bīīsī* *lá,*
1SG SUB IPFV speak CDM
tì *ŋòònì* *bá* *ká=mā.*
1PL test.PFV CL.2 FOC=PRED.EMPH
'As I speak, we have tested them.'

(615) *Tì* *lī* *á* *kpālīm* *tūēm-mú* *lá,*
1PL SUB IPFV fight disease.9-DEF.9 CDM
tì *lì* *nyā* *nyìŋ-yɔ̀g-sá*
1PL FUT get body-cool-6
'As we fight the disease, we will have good health.'

10.3.2 Time clauses with *dàn*

Dàn time adverbial clauses follow the main clause. The event in the adverbial clause can take temporal precedence over the event in the main clause, or indicate a condition that triggers the occurrence of the event in the main clause (616).

(616) *Wà* *dàn* *kò* *nídɔ̄-(ba)-má,* *wà* *tūēsī* *bà* *pō-(ba)má.*
CL.1 when kill man-2-DEF.2 CL.1 cease CL.2 wife-2-DEF.2
'When he kills the men, he ceases their wives.'

The event in the main can occur in the same temporal frame as the event in the *dàn*-adverbial clause. In (617), the event in the main clause overlaps temporally with the event the *dàn*-adverbial clause. The events in the two clauses can also occur simultaneously or concurrently, as (618) illustrates.

香港大學圖書館 HKU Libraries

(617) *Bí-sá-ŋá* *dàn* *á* *gɔ̄ā* *bà* *mà-(ba)-má* *nyīnī*
child-6-DEF.4 when IPFV sleep CL.2 mother.2-DEF.2 go.out

'When the children are sleeping, their mothers go out (of the room).'

(618) *Nídɔ̄-(ba)-má* *dàn* *á* *chɛ̄ŋ* *bà* *pō-(ba)-má* *á* *kūm*.
man-2-DEF.2 when IPFV go CL.2 wife-2-DEF.2 IPFV cry`

'While the men are going, their wives keep crying.'

In (619), the two events will occur in the future. However, the event in the *dàn*-clause will take temporal precedence over the event in the main clause.

(619) *Tì* *dàn* *ŋòònì* *bá,*
1PL when test.PFV CL.2
bà *lì* *kūlī.*
CL.2 FUT go.home

'After we have tested them [for virus], they will go home.'

In procedural discourse, *dàn*-adverbial clauses can be used to order various stages of a process. For instance, in (620), the event in the adverbial clause logically precedes the event in the main clause.

(620) *Sāā(b)-mú* *dàn* *bɔ̀bì,* *fì* *kōōrī.*
millet.gruel.9-DEF.9 when become.thick 1SG serve

'When the millet gruel becomes thick, you serve it.'

香港大學圖書館 HKU Libraries

10.3.3 Conditional clauses with *dàn*

Dàn-adverbial clauses can be used to express condition. In (621) and (622), a condition–sequence relation is encoded. The *dàn*-adverbial clause in each of the two sentences expresses a condition, while the main clause expresses a consequence.

(621)	*Kɔ̀sù-tá*	*dàn*	*tā*	*ní,*	*nì*	*wīēn*	*tí.*
	cough-8	if	grasp	2PL	2PL	say	1PL

'If you have cough attacks, inform us.'

(622)	*Bù*	*dàn*	*wààŋ,*	*tɛ̄ŋ-sā*	*yègà*	*lì*	*lō.*
	CL.9	if	spread	land-6	a.lot	FUT	fall

'If it [disease] spreads a lot, many countries will fall.'

A condition–consequence relation is expressed in (623) also. In this case, the consequence is a prohibition that is expected to follow the fulfilment of a condition.

(623)	*Nì*	*dàn*	*sùùrì*		
	2PL	if	wash.PFV		
	nì	*kán*	*tìrì*	*núrí*	*núrí.*
	2PL	NEG.IMP	touch	person.1	person.1

'After you have washed [your hands], do not touch anybody.'

香港大學圖書館 HKU Libraries

A conditional–concessive relation can be expressed using a *dàn*-adverbial clause. As (624) and (625) illustrate, the adverbial modifier *pòòm* 'even' is usually required in the *dàn*-adverbial clause. Whereas the *dàn*-adverbial clause expresses a condition, the main clause expresses a counter-expected outcome or effect of the condition.

(624) *Àdànlíé-wá* *dàn* *pòòm* *zèrì,*
NAME-DEF.1 if even refuse.PFV
wà *nɔ̄ŋ-kú* *kàn* *kūlī.*
CL.1 boyfriend.7-DEF.7 NEG.IPFV go.home
'Even if the Adanlie refused, her boyfriend does not go home.'

(625) *Bí-sá-ŋá* *dàn* *pòòm* *á* *kūm,*
child-6-DEF.4 if even IPFV cry
bà *mà-(ba)-má* *kàn* *wōm.*
CL.2 mother-(2)-DEF.2 NEG.IPFV hear
'Even if the children are crying, their mothers do not hear (them).'

The clausal determiner *lá* is usually not used in *dàn*-adverbial clauses. But it occurs quite frequently as an optional element in contexts such as (626) after the *ká=mā*. In this context, the *dàn*-adverbial clause indicates that a condition was not met, whereas the main clause indicates that the unfulfilled condition consequently hindered a potential outcome.

(626) *Bùlìsà* *dàn* *sìàg* *ká=mā* *lá,* *Bábátù*
NAME.6 if agree.PFV FOC=PRED.EMPH CDM NAME
tìn *lì* *vārī* *tɛ̄ŋ-ká.*
CTF FUT snatch land.5-DEF.5
'If Bulisas had agreed, Babatu would forcefully seize the land.'

香港大學圖書館 HKU Libraries

10.3.4 Manner clauses with *àsī*

Manner adverbial clauses are used to describe the manner in which the event in the main clause occurred. The preposition *àsī*, which compares entities or situations, is also used as a subordinating conjunction to introduce the manner clause. In this subordinating use, *àsī* connects two events in a comparative relation so that the event in the main clause is said to resemble the event in the adverbial clause (627)-(628). The clausal determiner *lá* optionally occurs as the final element in the adverbial clause.

(627) *Wà* *fɔ̀b* *bá* *dùènì* *àsī* *bà* *dāā* *nú-bà.*
CL.1 strike.PFV CL.2 put.down as.if CL.2 NEG.FOC person-2
'He struck them down as if they are not human beings.'

(628) *Wáá(b)-mú* *dɔ̀à* *sīkī* *àsī* *bù* *kpì* *lá.*
snake.9-DEF.9 lie.down IDEO as.if CL.9 die.PFV CDM
'The snake lay down as if it was dead.'

香港大學圖書館 HKU Libraries

10.3.5 Negative conditional (apprehensive) clause with *sēkā*

The negative conditional (apprehensive) clause expresses a condition that must be met to forestall the occurrence of an unpleasant situation. The adverbial clause expresses this condition, whereas the main clause gives a situation that has necessitated the condition. *Sēkā* introduces the negative conditional clause, and it conveys a meaning similar to that of English 'unless, lest'. As shown in (629)-(630), the main clause precedes the negative conditional clause.

(629) *Ɗmán-á-ŋá* *sāālā* *ká=mā,* *sēkā*
okro-4-DEF.4 be.slimy FOC=PRED.EMPH unless
m̀ *nyō* *kāūŋ* *dú.*
1SG take potash.7 there
'The okro is slimy; I must put potash in it.'

(630) *Tūēm-mú* *dièm* *bō=rú* *ká=mā,*
disease.9-DEF.9 still be.located=there FOC=PRED.EMPH
sēkā *tì* *pīlīm* *lìg* *bān-ní.*
unless 1PL again close border-DEF.3
'The disease still exists, so we have to close the border again.'

香港大學圖書館 HKU Libraries

10.3.6 Purpose clauses with *àyén*

The quotative complementiser *àyén* (sometimes pronounced [*àín*]) can be used to express purpose relations. *àyén* introduces the purpose clause which follows the main clause. As shown in (631) and (632), the main clause, which occurs first, expresses an action being taken, whereas the purpose clause expresses the intention or motive behind the performance of the action.

(631) *Tì* *à* *nyɛ̄* *dí-lá* *àyén* *tì* *tēbī* *tūēm-mú.*
1PL IPFV do CL.3-DIST PURP 1PL treat disease.9-DEF.9
'We are doing that so that we cure the disease.'

(632) *Bà* *gìlìm* *Bábátù* *àyén*
CL.2 encircle.PFV NAME PURP
bà *yīg* *wà* *dék.*
CL.2 capture CL.1 EMPH
'They encircled Babatu so that they would capture himself.'

10.3.7 *Àtì*-adverbial clauses

The connective *àtì* has several semantic implications highlighted below:

- **Action–Purpose/Duration**

The first clause describes an action, while the second clause indicates the purpose or duration of the action.

(633) *Bà* *bò=ó* *dú-lá* *téé* *àtì* *tēŋ-ká* *sɔ̀blì.*
CL.2 be.located=FOC there-DIST IDEO CONN land.5-DEF.5 get.dark.PFV
'They stayed there until dark (lit.: They stayed there until the earth grew dark.')

香港大學圖書館 HKU Libraries

- **Action–Purpose/Result**

The first clause expresses an action, whereas the goal or result of the action.

(634) *Bùlìsà* *kàsìm* *á* *kpālīm* *ká=mā* *àtì*
NAME-6 persistently IPFV fight FOC=PRED.EMPH CONN
nyìŋ-yɔ̀g-sá *jàm.*
body-cool-6 come.PFV

'Bulisa kept fighting persistently for freedom to gain freedom.'

- **Cause–effect**

The first clause expresses a cause, whereas the second clause expresses an effect.

(635) *Tūēm* *lī* *tà* *bá,* *àtì* *bà*
disease.9 FOC attack CL.2 CONN CL.2
àn *bāg* *á* *vūūsī.*
NEG be.able IPFV breathe

'A disease has attacked them, and they cannot breathe.'

- **Action–Purpose**

The first clause expresses an action, whereas the second clause expresses the purpose of the action.

(636) *Bà* *kàlì* *ká=mā* *àtì* *tì* *bììsì* *wá-ní.*
CL.2 take.PFV FOC=PRED.EMPH CONN 1PL discuss.PFV issue-DEF.3

'They sat down for us to discuss the issue.'

香港大學圖書館 HKU Libraries

- **Reason – Outcome/Result**

The adverbial clause expresses a reason, whereas the second clause expresses an outcome or a result. The adverbializer *lī* and the clausal determiner *lá* feature in this construction. *Nyīŋ* (lit. 'body') gives the first clause an unambiguous 'reason' interpretation.

(637) *Àzántìló* *lī* *zèrì* *lá* *nyīŋ,* *àti* *Bùlìsà*
NAME SUB refuse.PFV CDM reason CONN NAME.6
bàsì *kpālīŋ-ká.*
cease.PFV war.5-DEF.5

'Bulisa ceased the war because Azantilo refused [to consent to war].'

香港大學圖書館 HKU Libraries

10.4 Coordination

10.4.1 Conjunctive coordination with *àlì, àbī,* and *yāā*

Aside from its propositional uses, *àlì* can link clauses that express different events. Two structural types occur in my corpus. The first type, illustrated in (638), requires equi-deletion of the subject in the second clause as a single subject performs the events. The event in the second clause is construed as occurring concomitantly or concurrently with the main event (in the first clause).

(638) *Nípō-(ba)-má* *à* *yīīlī* *ká=mā* *àlì* *á* *gɔ̄g.*
woman-2-DEF.2 IPFV sing FOC=PRED.EMPH and IPFV dance
'The women sing while dancing.'

In the second type, though optional, *àlì* is frequently inserted between two clauses that can be juxtaposed. The first clause may be an adverbial clause providing a temporal setting for the event in the second clause (639). The first clause may encode a general act of perceiving, so that the second clause provides details about what was perceived (640).

(639) *Bà* *lī* *pāārī* *Nàvróngò* *lá* *àlì*
CL.2 when reach PLACE CDM and
nàà-wá *dék* *kā=rú.*
Chief-DEF.1 EMPH not.located=there
'When they reached Navrongo, the chief himself was not around.'

(640) *Mí* *nyā* *lì* *bà* *jì* *kūū(b)-mú* *tìàk-ká.*
1SG see and CL.2 carry funeral.9-DEF.9 mat-DEF.5
'I noticed that they carried they funeral mat.'

香港大學圖書館 HKU Libraries

Àbī links clauses to indicate the temporal sequence in which the events they express occur. The logical order is for the event in the first clause to occur first, followed by the event in the second clause (641). Although the same subject performs the events in the two clauses, equi-deletion rarely applies to elements in the second clause.

(641) *Bà* *lì* *vūūsī* *àbī* *bà* *gēb* *wá.*
CL.2 FUT rest then CL.2 cross.PFV CL.1
'They will rest and then cross him.'

Yāā serves a similar function as *àbī,* by linking events in a logical temporal sequence (642). However, equi-deletion affects the subject in the second clause. In narratives, where series of events are connected, *yāā* typically introduces the last event in the series (643).

(642) *Wà* *nàg* *bá* *yāā* *tùèsì* *bà* *tēŋ-sā.*
CL.1 beat.PFV CL.2 then collect.PFV CL.2 land-6
'He beat them, and then (he) seized their lands.'

(643) *(...)* *àtì* *àdànlíé-wá* *á* *gɔ̄g,* *dìn* *á* *gɔ̄g,*
CONN NAME.1-DEF.1 IPFV dance passionately IPFV dance

à *pùùsì* *nù-(ba)-má,*
SC greet person-2-DEF.2

à *gà* *kòòrì* *wà* *chōrō-wá* *níŋ,*
SC go squat CL.1 husband.1-DEF.1 front

à *tùèsì* *dààm-mú* *à* *nyù,*
SC receive wine.9-DEF.9 SC drink

yāā *gà* *jò* *dɔ̀k*
then go enter room

'… and the Adanlie continued dancing – kept dancing passionately, greeted the people, went to squat in front of her husband, received the wine, drank it, then entered the room.'

香港大學圖書館 HKU Libraries

10.4.2 Disjunctive coordination with *kóó* and *yàā(sī)*

Yàā and *kóó* connect clauses that express alternative events presented to an addressee, as illustrated in (644)-(645). A special case in the use of *kóó* is that the entire clause coming after it is usually omitted. In this case, *kóó* is the final element in a single clause that overtly expresses an alternative (646). Although not overtly expressed, a second alternative is implied.

(644)

Fì	*à*	*dàm*	*bú*	*ká=mā,*	*yàā*
2SG	IPFV	stir	CL.9	FOC=PRED.EMPH	or
fì	*kàn*		*dām?*		
2SG	NEG.IPFV		stir		

'Do you stir it [millet gruel] or don't you stir it?'

(645)

Bà	*gū*	*chin-à-ŋá*	*kóó*	*bá*	*yūg*	*bàsì*	*wūūk*	*pō.*
CL.2	bury	utensil-4-DEF.4	or	CL.2	throw	put.away	bush	in

'They bury the utensils or throw them into a bush.'

(646)

Wà	*tɔ̄m-mú*	*kā*	*jíírím*	*kóó?*
CL.1	warband.9-DEF.2	not.have	compassion.9	or

'His warband lacks compassion, or?'

10.4.3 Adversative coordination with *àlīgè* and *àmāā*

10.4.3.1 Adversative clauses with àlīgè

Àlīgè links clauses that present contrasting ideas or propositions. The second clause may express a belief or hope against a situation expressed by the first clause (647). Alternatively, the second clause may express a counter-expected outcome against a situation in the first clause (648). As

香港大學圖書館 HKU Libraries

illustrated in (649), if the linked clauses share the same subject, equi-deletion may affect the subject of the second clause.

(647) *Kù* *pāgrā* *ká=mā,* *àlīgè* *nààwén* *lì* *māāri.*
CL.7 be.difficult FOC=PRED.EMPH but god FUT help
'It's difficult, but God will help.'

(648) *Bà* *sìàg* *ká=mā,* *àlīgè* *(bà)*
CL.2 agree.PFV FOC=PRED.EMPH but CL.2
pìlìm *lìg* *súúk-kú.*
again close.PFV path.7-DEF.7
'They agreed, but they blocked the path again.'

The component *lī* in *àlīgè* is sometimes dropped, leaving *(à)gē*. This is illustrated in (649) and (650). As Kröger (1992: 40) notes, *(à)gē* is most likely derived etymologically from the verb *gē* 'leave behind'.

(649) *Àdánlié-wá* *à* *jò=ó=mā,* *àgē* *wà*
NAME-DEF.1 IPFV enter=FOC=PRED.EMPH but CL.1
kàn *pūūsī.*
NEG.IPFV greet
'The Adanlie enters [the room], but she does not greet.'

(650) *Jèn-tà-ŋá* *māsā* *àgē* *tì* *pɔ̄sīmā.*
soup-8-DEF.4 be.delicious but CL.8 be.small
'The soup is delicious, but it is small.'

香港大學圖書館 HKU Libraries

Another semantic implication associated with the use of *àlīgè* is temporal. In contexts such as (651) and (652), *àlīgè* links two clauses to indicate the temporal sequence of events. Here, *àlīgè* expresses a meaning similar to 'before'. The event in the first clause occurs first, followed by the event in the second clause.

(651) *Bà* *mièná* *tùèsì* *tìì-tà-ŋá* *ká=mā* *àlīgè*
CL.2 all collect.PFV medicine-8-DEF.4 FOC=PRED.EMPH before
disperse.PFV
wààŋ.

'All of them collected the medicines before (they) dispersed.'

(652) *Tì* *lì* *tēbī* *bá* *àgē* *bà* *kūlī.*
1PL FUT treat CL.2 before CL.2 go.home

'We will treat them before they go home'

10.4.3.2 Adversative clauses with àmāā

The Hausa origin coordinator *àmāā* has similar adversative uses as *àlīgè.* For example, in (653), *àmāā* links two clauses that express opposing viewpoints. The event in the second clause ('keeping hold of a lady') is not expected, because it opposes the event ('refusal of the lady') in the first clause. A similar situation is see in (654) where the events in the two clauses represent opposing perspectives or outcomes regarding the impact of a disease in different countries. Equi-deletion is much less common in clauses linked by *àmāā.*

(653) *Nípō-wá* *lì* *zērī* *àmāā* *nídɔ̄-(ba)-wá*
woman-DEF.1 FUT refuse but man-2-DEF.1
tà=á=mā.
hold=FOC=PRED.EMPH

'The woman will refuse but the man keeps hold [of her]'

香港大學圖書館 HKU Libraries

(654) *Tūēm-mú* *wààŋ* *ká* *yègà,* *àmāā* *bù* *àn* *pàárí*
disease.9-DEF.9 spread.PFV FOC a.lot but CL.9 NEG.PFV reach
tàmá *tɛ̄ŋ-ká*
1PL.INCL land.5-DEF.5

'The disease spread [in other countries] a lot but did not reach our country.'

10.4.4 Parataxis (covert coordination)

Clauses can be juxtaposed in a particular order to express various relations. A common clause type involves a quotative construction that expresses a logical deduction based on a situation. This is illustrated in (655) and (656). In this parataxis, a complex quotative construction makes an inference or draws a logical conclusion based on a situation expressed in the initial clause.

(655) *Wà* *à* *nyɛ̄* *nípō-(ba)-má* *ká* *dí-lá,*
CL.2 IPFV do woman-2-DEF.2 FOC CL.3-DIST
fì *à* *wīēn* *bà* *kā* *nyām* *a.*
2SG IPFV say CL.2 not.have owner.2 SP

'He does that to the women; you would say they have no owners.'

(656) *Bà* *námbí-é* *kàn* *tū* *chāāb,*
CL.2 eye-4 NEG.IPFV meet each.other
fì *à* *pōlī* *bà* *ká* *dàchāā-sā.*
2SG IPFV think CL.2 FOC rival-6

'They avoid eye contact; you would think they are RIVALS.'

香港大學圖書館 HKU Libraries

10.5 **Reported speech and thought**

The verb *wīēn* ‘say’ is used in a reporting clause to introduce reported or quotative clause, as illustrated in (657).

(657) *Àchám* *à* *wìēn* *Bùlìsà* *zāānī* *gérímm.*
NAME IPFV say NAME.6 stand firm:IDEO
‘Acham says Bulisa should stand firm.’

The quotative complementiser *àyén*, which derives etymologically from *wīēn*, ‘say’ is also frequently used to introduce the reported clause. *àyén* can be used together with *wīēn* ‘say’ to introduce the reporting clause (658).

(658) *Félik-ká* *à* *wìèn* *àyén* *wà* *lì* *māārī* *Gáánà.*
whiteman.5-DEF.5 IPFV say COMP CL.1 FUT help PLACE
‘The white man says he will assist Ghana.’

Aside from the verb *wìèn* ‘say’, the quotative complementiser *àyén* is commonly used with a range of perception, cognitive, and utterance verbs (e.g. *wū* ‘call’, *kāārī* ‘scream’, *sīāgī* ‘agree’, *wāāsī* ‘whisper’, *wōm* ‘hear’ and *pōlī* ‘think’). The following sentences illustrate the use of *àyén* with *sīāgī* ‘agree’ (659), *wōm* ‘hear’ (660), and *pōlī* ‘think’ (661).

(659) *Tì* *kàn* *sīāg* *àyén* *nú-rí* *jō.*
1PL NEG.IPFV agree COMP person-3 enter
‘We do not agree that any person enters.’

(660) *Tì* *kò-(ba)-má* *wòm* *àyén*
1PL father-2-DEF.2 hear.PFV COMP
kànbòŋ-sà *à* *kāāsī* *tɛ̄ŋ-ká.*
stranger-6 IPFV destroy land.5-DEF.5
‘Our fathers heard that strangers are destroying the land.’

香港大學圖書館 HKU Libraries

(661) *Wà* *pòlì* *àyén* *vā-rī* *vìèntì.*
CL.1 think.PFV COMP dawn-3 open.up
'He thought that day had broken.'

The quotative complementiser has impersonal uses in contexts such as (662), where there is no subject.

(662) *Àyén* *Bùlùk* *kàn* *lō.*
QUOT PLACE NEG.IPFV fall
'It is said that Buluk does not fall.'

The preposition *àsī*, which functions as a similative marker and is used in some manner clauses, is sometimes used as a quotative complementiser.

(663) *Bēg* *àpōk* *sī* *wà* *tà* *jɔ́ŋ* *yàà.*
ask NAME COMP CL.1 have dawadawa.7 or
'Ask Apok whether she has dawadawa or not.'

香港大學圖書館 HKU Libraries

10.5.1 Attention getters: *nāā* and *(ǹ)wāā*

When reporting, Buli speakers sometimes insert the elements *nāā* or *wāā* after the quotative verb *wīēn* 'say' or the quotative complementiser *àyén*. The etymology of these words is presently not known. However, considering that *nāā* resembles the demonstrative *ǹnā* in form and function, the two of them may be etymologically related. It is also possible that *wāā* is related to *ceèwaa*, a complementiser in Hausa (see Güldemann 2008 for a discussion on *ceèwaa*).

(664) *Nì* *bēg* *àyén* *wāā* *tūēm-mú* *nyɛ̀=ɛ́* *sè* *jò.*
1PL ask COMP ATG disease.9-DEF.9 do.PFV=FOC how enter
'You should ask how the disease entered [our country]'

(665) *Àchám* *à* *wìēn* *nāā* *Bùlìsà* *kàn* *lō* *tɛ̄ŋ*
NAME IPFV say ATG NAME.6 NEG.IPFV fall ground.5
'Acham says that Bulisa do not fall.'

Finally, *wāā* is often employed in narratives to attract audience attention. A narrator normally opens a story using the phrase *Ká ǹ-wāā* 'It is that …'. This is illustrated in (666). The function of *wāā*, thus, is to hook the audience attention to the story (discourse) that follows.

(666) *Ká* *ǹ-wāā* *Àsūōm* *àlì* *Àwàlīk* *lī* *tà* *kpālīm…*
FOC PRT-ATG NAME and NAME FOC have quarrel…
'It is that Hare and Antelope had a quarrel…'

香港大學圖書館 HKU Libraries

11 Information structure

11.1 Introduction

Information structure refers to the linguistic means by which speakers encode propositional content based on their assessment of knowledge shared by the interlocutors. Based on this shared knowledge, a speaker intentionally gives specific aspects of their utterance salience or prominence to distinguish them from other elements.

Buli speakers employ *lī* and *ká* to signal salient or prominent information to their listeners. Both of them are, in fact, highly frequent in all kinds of texts, whether spontaneous or elicited, spoken or written. They are prevalent in various constructions and serve crucial discourse-pragmatic functions (see also Schwarz 2016). In their focus marking usage, which is considered in this chapter, they essentially signal where the burden of information lies.

The following sections are organised as follows: Section 11.2 describes focus marking using *lī*, Section 11.3 describes focus marking using *ká*, and Section 11.4 illustrates the relationship between *lī* and *ká*. Section 11.5 explains the function of the topic marker *tɔ̄g(ní)*.

香港大學圖書館 HKU Libraries

11.2 **Focus marking with *lī***

The focus marker *lī* gives prominence to an element in the clause. As illustrated in the sentences in (667), *lī* focalises elements in SVO constructions. With *bàŋká* 'the lizard' focalised in (667)b., other possible alternatives, say 'the bird', are excluded. The construction in (667)b. answers a question such as 'What/Who ate the bee?'

(667) a. *Bàŋ-ká* *ŋɔ̀b* *sí-rí.* (Basic SVO)
lizard.5-DEF.5 eat.PFV bee-3
'The lizard ate a bee.'

b. *Bàŋ-ká* *lī* *ŋɔ̀b* *sí-rí.* (Focus with *lī*)
lizard.5-DEF.5 FOC eat.PFV bee-3
'THE LIZARD ate a bee.' (not the bird)

In non-verbal clauses, such as presentational and identificational clauses, *lī* directs focus to specific entities. The following sentences illustrate this use.

(668) *Àyíétá* *lī* *Bùlì-sà* *nààb.*
NAME FOC NAME-6 chief
'AYIETA is chief of Bulisa (people).'

(669) *Wà* *yúé* *lī* *Bábátù.*
CL.1 name FOC NAME
'HIS NAME is Babatu.'

(670) *Bòòsūk-kú* *lī* *ǹnā*
grave.7-DEF.7 FOC PROX.PRSTV
'Here is THE GRAVE.'

(671) *Àkúmchám* *lī* *lá*
NAME FOC DIST
'That is AKUMCHAM.'

香港大學圖書館 HKU Libraries

Additionally, *lī* is commonly used in question-and-answer exchanges. In this context, there is an information gap represented by an interrogative element. This interrogative element is focal, since it requests information. The gap is filled with a salient element that serves as a response to the question (672).

(672) A: ***Bɔ̀à*** *lī* *ànīāk* *dìg?*
what FOC NAME cook.PFV
'WHAT did Aniak cook?'

B: ***Sūm-ā*** *lī* *ànīāk* *dìg.*
bambara.bean-4 FOC NAME cook.PFV
'Aniak cooked BAMBARA BEANS.'

香港大學圖書館 HKU Libraries

11.3 **Focus marking with *ká***

Ká performs a similar function as *lī*. In a basic SVO construction, *ká* can focalise the element occupying various elements of utterances. The construction in (673)b. answers the question 'What did Abili chew?'. Since the entity ('egg') in question is salient, it is marked by *ká* as the focal element in the sentence. Verbs cannot be marked for focus in the same way as nominals; however, as shown in (673)c., the focus marker is used alongside the emphatic marker *=ma* to give salience to the action expressed by the verb. This construction answers the "What did Abili do?". Since the entity ('egg') in question is salient, it is marked by *ká* as the focal element in the sentence. *Ká* marks out salient elements within utterances in chunks, sometimes presenting only the salient element in a non-verbal clause. It is possible to analyse (673)b. as a bi-clausal structure, once the verb *ŋɔ̀b* 'chew' can be used intransitively.

(673) a. *Àbìlí* *ŋɔ̀b* *jén.* (Basic SVO)
NAME chew.PFV egg.3
'Abili chewed an egg.'

b. *Àbìlí* *ŋɔ̀b* *ká* *jén* (Focus with *ká*)
NAME chew.PFV FOC egg.3
'Abili chewed AN EGG.'

c. *Àbìlí* *ŋɔ̀b* *ká=ma* (Focus with *ká*)
NAME chew.PFV FOC=PRD.EMPH
'Abili CHEWED it.'

d. *Ká* *jén* (Focus with *ká*)
FOC egg.3
'It is an egg.'

香港大學圖書館 HKU Libraries

When seeking information, a questioner usually focalises the question elements, which signifies an information gap that needs to be filled. The salient information given by the answerer fills this gap. The following extract illustrates the use of *ká* in a question-and-answer exchange:

(674) A: *Bábátù* *pà* *ká* ***bɔ̀à*** *á* *kpālīm?*
NAME use FOC what IPFV fight
'What (weapons) did Babatu use for fighting.'

B: *Wà* *pà* *ká* ***wùsùm-à*** ***lì*** ***kànbòŋ-dàà-tà***
CL.1 use FOC horse-4 and foreigner-stick-8
á *kpālīm.*
IPFV fight
'He (Babatu) used horses and rifles for fighting.'

Other elements (e.g. temporal nouns and numerals) can also be focalised, as illustrated in (675)-(676)

(675) A: *Bà* *pàà* *ká* ***dìnpō?***
CL.2 arrive.PFV FOC when
'WHEN did they arrive?'

B: *Bà* *pàà* *ká* ***àgbá.***
CL.2 arrive.PFV FOC noon
'They arrived at NOON.'

香港大學圖書館 HKU Libraries

(676) A: *Wà* *tɔ̄m-mú* *jàm* *ká*
CL.1 warband.9-DEF.9 come.PFV FOC
nántúéná ***ŋà-nà***?
number.of.times.4 CL.4-INTERR

'How many times did his warband come?'

B: *Bà* *jàm* *ká* ***nántúéná*** ***ŋà-nù****?*
CL.2 come.PFV FOC number.of.times.4 CL.4-five

'They (his warband) came FIVE TIMES.'

(677) A: *Léé-wá* *ká* ***wà-nà****?.*
lady-DEF.1 FOC CL.1-INTERR

'WHO is the lady?'

B: *Wà* *ká* ***Àtìé*** ***bíík.***
CL.1 FOC NAME child.5

'She is a CHILD OF ATIE.'

Additionally, *ká* is used in contexts like (678) to focalise qualities associated with a character.

(678) *Àlàmísí* *ká* *bùmbɔ̀brɔ̀*
NAME FOC gossip.1

'Alamisi is a GOSSIP.'

香港大學圖書館 HKU Libraries

In contexts where a speaker seeks to know the identity of an entity (679), correct a misidentified entity (680), or understand a situation/state (681), *ká* is used to focalise only salient elements leaving out other elements.

(679) A: *Ká* ***bɔ̀à.***
FOC what
'What is it?'

B: *Ká* *júúk.*
FOC mongoose
'It is a mongoose.'

(680) A: *Nyā* *dàyūūk.*
see bandicoot.7
'See a bandicoot!'

B: *Ká* *júúk.*
FOC mongoose
'It is a mongoose.'

(681) A: *Ká* *sè* *a?*
FOC how SP
'How is it?' / 'How are you?'

B: *Ká* *nālīm.*
FOC fine.9
'It is fine.'/ 'I am doing well.'

香港大學圖書館 HKU Libraries

Due to the flexible character of *ká,* it can be used for fronting salient elements of constructions – and to derive cleft constructions. Fronted elements are typically nominals and adverbials.

(682) a.

Àsūɔ̄k	*sè*	*ká*	*chùmbén.*
NAME	roast.PFV	FOC	corn-3

'Asuok roasted a corn.'

b.

Ká	*chùmbén*	*àtì*	*Àsūɔ̄k*	*sè.*
FOC	corn.3	CONN	NAME	roast.PFV

'It is A CORN that Asuok roasted.'

(683) a.

Tì	*gù*	*Àchám*	*ká*	*pùŋ-kú*	*ŋààŋ.*
1PL	bury.PFV	NAME	FOC	rock-DEF.7	back.5

'We buried Acham BEHIND THE ROCK.'

b.

Ká	*pùŋ-kú*	*ŋààŋ*	*àtì*	*tì*	*gù*	*Àchám.*
FOC	rock.7-DEF.7	back.5	CONN	1PL	bury.PFV	NAME

'It was BEHIND THE ROCK we buried Acham.'

As can be seen in the examples, *ká* fronts a focal element. When this focal element fronted, the *àtì* connects the element containing the information given about the focal element. The connective can be dropped so that the focal construction are placed loosely side-by-side as paratactic structures.

香港大學圖書館 HKU Libraries

(684) a. *Ká* *chùmbén* *Àsūɔ̄k* *sè.*
FOC corn.3 NAME roast.PFV
'It is A CORN, Asuok roasted.'

b. *Ká* *pùŋ-kú* *ŋààŋ* *tì* *gù* *Àchám.*
FOC rock.7-DEF.7 back.5 1PL bury.PFV NAME
'It was BEHIND THE ROCK, we buried Acham.'

11.4 Relationship between *ká* and *lī*

In Sections 11.2 and 11.3, I showed that the focus markers *ká* and *li* occur in constructions to 'point to' where the burden of information lies. This section explains how they complement each other in marking focal elements within elaborate utterances. Due to the mobile character of *ká*, it can focalise constructions that already contain a focal element marked by *li.* Compare (685) and (686).

(685) a. *Àyɔ̀má* *lī* *dìg* *túé.*
NAME FOC cook.PFV bean.4
'It is Ayoma who cooked beans.'

b. *Túé* *lī* *Àyɔ̀má* *dìg.*
bean.4 FOC NAME cook.PFV
'It is beans who cooked beans.'

(686) a. *Ká* *[Àyɔ̀má* *lī* *dìg* *túé].*
FOC NAME FOC cook.PFV bean.4
'It is AYOMA WHO COOKED BEANS.'

b. *Ká* *[túé* *lī* *Àyɔ̀má* *dìg].*
FOC bean.4 FOC NAME cook.PFV
'It is beans who cooked beans.'

香港大學圖書館 HKU Libraries

In (686), the constructions in brackets are focalised. This way of presenting a construction that contains a focal element creates suspense, as both an actor and their action are given prominence. In opening narratives, this type of construction is usually employed. Sentence(687) is another example.

(687)	*Ká*	*bíík*	*lī*	*bè*	*bò*	*sàg*	*pō,*	*àtì …*
	FOC	child.5	FOC	be.lost	be.located	forest.PFV	in	CONN

'A CHILD GOT MISSING IN A FOREST … '

11.5 Topic shift and emphasis with *tɔ̄g(ní)*

Tɔ̄g marks the topic in a sentence. It appears to be originally *tɔ̄gi,* and a noun of class 3 with the final vowel falling out and the class 3 definite marker *-ní* now fused with it to derive *tɔ̄gní*. The element *tɔ̄gā* 'different/separate' is related to the topic marker not only in form but also in meaning, considering that it distinguishes an element which the sentence is about from other elements. This topic is the theme on which the information following centers.

In (688) Speaker A recounts an ordeal of enslaved Bulisa men. Speaker B inquires about the experience of women. These women are introduced as a new topic by *tɔ̄gní.* Speaker A's response includes another topic introduced by *tɔ̄gní*. Following Speaker B's interjection is another topic ('cattle') introduced by *tɔ̄gní.*

香港大學圖書館 HKU Libraries

(688) A: *(…)* *àtì* *wà* *kàsìm* *á* *mīīrī* *nídɔ̄-(ba)-má*
CONN CL.1 continuously IPFV lash man-2-DEF.2
'… and he continuously kept lashing the men.'

B: *Nípō-(ba)-má* *tɔ̄gní,* *wà* *bàsì* *bá* *ká=mā?*
woman-2-DEF.2 TOP CL.1 leave.PFV CL.2 FOC=PRED.EMPH
'What of the women, did he leave them?'

A: *Nípō-(ba)-má* *lì* *bí-sá-ŋá* *tɔ̄gní,*
woman-2-DEF.2 and child-6-DEF.4 TOP
wà *tùsì* *bá* *lɔ̀nsì* *ká* *yàr-yàr-yàr.*
CL.1 push.PFV CL.2 drop FOC anyhow:IDEO
'As for the women and children, he pushed them to the ground anyhow.'

B: *Wóí*
'Oh God!'

A: *Dūŋ-sā-ŋá* *tɔ̄gní* *chàlì* *jò=ó* *sàg-ní*
livestock-6-DEF.4 TOP run.PFV enter=FOC forest.3-DEF.3
Pō.
in
'As for the livestock, they escaped into the forest.'

香港大學圖書館 HKU Libraries

12 Final remarks

This grammatical description was undertaken against the backdrop that Buli, along with its relatives, has not received sufficient attention in mainstream linguistics. Nearly four decades ago, Tony Naden observed that the Gur/Mabia languages and the people who spoke these languages were poorly understood, and there were no adequately trained linguists investigating them (Naden 1988). In comparison to Kwa languages (e.g. Akan, Ewe), which Buli is areally cl to and for a long time been in contact with, or to the famous Bantu family, Buli and its neighbours within the Gur/Mabia family, are yet to find a pride of place in mainstream linguistics research, in quantity and depth of the existing literature.

This description contributes to the growing body of research on Buli, a member of the less familiar language family. With the historical and ethnographic notes, together with the frequent comparative remarks of Buli with other languages, this work will be beneficial to linguists of various persuasions, and anyone interested in learning about the less-familiar Gur/Mabia family and societies that speak these languages. This study contributes to the development of inadequately described African languages, whose quality of description, Heine & Nurse (2000) described two-and-half decades ago as poor.

Regarding topic coverage, this description encompasses more issues in Buli grammar than previous research on the language. Ideophones and interjections, two integral categories often neglected in descriptive grammars of African languages, have been covered in this work. Similarly, other less researched categories in Gur/Mabia languages, like adverbial modifiers, have been covered in this thesis to garner interest in the topic. Moreover, the comparative remarks included in this description could be beneficial for research on other African languages, some of which Buli has borrowed vocabulary from.

香港大學圖書館 HKU Libraries

Some topics covered in this grammar were addressed in previous studies; however, their inclusion in this work not only ensures that the description contains all the essential building blocks of Buli, but builds on such studies. Alternative analyses have been presented in some cases (e.g. vowel system), while others have been discussed in greater depth in this work than in previous studies (e.g. noun class system). Some of the issues covered in this thesis, such as simple clause types (e.g. non-verbal clauses, question constructions, etc.), spatial and temporal relations, multiverb constructions and their functional types (e.g. consecutive and non-consecutive SVCs), inter-clausal relations (e.g. adverbial clause constructions, parataxis/covert coordination, etc.), to the best of my knowledge, have not been explored. All of this, I hope, will offer users of this grammar a thorough understanding of the essential building blocks that make up the language.

The reliance of this description on spontaneous naturalistic data and without the incumbrances of aprioristic assumptions or theories has revealed elements of the language that might have otherwise gone unnoticed. Ideophones, interjections, and attention-getters described in this thesis would likely evade elicitation and introspective data construction methods. Perhaps, this is why these elements have not received adequate attention in Buli linguistics, and Gur linguistics in general. Regarding theory, this work did not seek to apply aprioristic frameworks or assumptions to the data or to test the totality of such frameworks or assumptions; a purely descriptive approach was adopted, with relevant aspects of frameworks like autosegmental phonology, adapted to assist with the explanation of the data where necessary. With this, I hope this description will be accessible and relevant to users of diverse backgrounds – to the layman as much as to linguists of varying theoretical persuasions.

Overall, this thesis is foundational material for producing a comprehensive grammar of Buli, a valuable reference resource for describing individual Gur/Mabia languages, comparative-Gur/Mabia studies, and comparative or typological studies in general linguistics.

香港大學圖書館 HKU Libraries

References

Abubakari, Hasiyatu. 2018. *Aspects of Kusaal grammar: the syntax-information structure interface*. PhD thesis, University of Vienna.

Adjong, Darius. 2018. *A morpho-syntactic study of the Buli verbal group*. MPhil thesis, University of Ghana.

Aikhenvald, Alexandra Y. 2006. Serial verb constructions in typological perspective. In Alexandra Y Aikhenvald & Robert M W Dixon (eds.), *Serial verb constructions: a cross-linguistic typology* (Explorations in Linguistic Typology 2), 1–68. Oxford: Oxford University Press.

Aikhenvald, Alexandra Y. & R. M. W. Dixon (eds.). 2006. *Serial verb constructions*. Oxford: Oxford University Press.

Akanlig-Pare, George. 1994. *Aspects of Buli phonology*. MPhil thesis, University of Ghana.

Akanlig-Pare, George. 1999. Nominal derivation in Buli. *Cashiers Voltaïque-Gur Papers* 4, 99–109.

Akanlig-Pare, George. 2005. *Buli tonology: a non-linear approach*. PhD thesis, University of Ghana.

Ameka, Felix K. 2001. Multiverb constructions in a West African areal typological perspective. *Online Proceedings of TROSS–Trondheim Summer School*.

Angsongna, Alexander. 2023. *Aspects of the morphophonology of Dagaare*. PhD thesis, University of British Columbia.

Anquandah, James. 1998. *Koma-Bulsa: Its art and archaeology*. Istituto italiano per l'Africa e l'Oriente, Rome.

Apentiik, Rowland A. 2003. *An ethnoecological study of Bulsa land use, Upper East region of Ghana: implications for sustainable development*. PhD thesis, University of Calgary.

Armitage, Cecil H. 1924. *The tribal markings and marks of adornment of the natives of the northern territories of the Gold Coast colony*. London: Royal Anthropological Institute.

Awedoba, Albert K. 2006. *The peoples of northern Ghana*. National Commission on Culture, Ghana.

Bamgbose, Ayo. 1982. Issues in the analysis of serial verb constructions. *Journal of West African Languages* 12(2), 3–21.

Bendor-Samuel, John T. 1965. The Grusi sub-group of the Gur languages. *Journal of West African Languages* 2, 47–55.

香港大學圖書館 HKU Libraries

Bisilki A. K, Quint N, Yakpo K. 2024. Relativization in Likpakpaln (Ghana): new typological perspectives on the Mabia (Gur) languages. *Canadian Journal of Linguistics/Revue Canadienne de Linguistique*. 69(2), 235-255. doi:10.1017/cnj.2024.17

Blevins, Juliette. 1995. The syllable in phonological theory. In John A. Goldsmith (ed.), *The handbook of phonological theory*, 206–244. Cambridge MA: Blackwell.

Bodomo, Adams. 1993. Complex predicates and event structure: an integrated analysis of serial verb constructions in the Mabia languages of West Africa. *Working Papers in Linguistics No. 20*.

Bodomo, Adams. 1994. Language, history and culture in northern Ghana: an introduction to Mabia linguistic group. *Nordic Journal of African Studies* 3(2), 25–43.

Bodomo, Adams. 1997. *The structure of Dagaare* (Stanford Monographs in African Languages). Stanford, CA: CSLI.

Bodomo, Adams. 2020. Mabia: its genesis, geographical spread, and some salient genetic Features. In Adams Bodomo, Abubakari Hasiyatu & Samuel Alhassan Issah (eds.), *Handbook of the Mabia languages of West Africa*, 5–34. Glienicke: Galda Verlag.

Cahill, Michael Clark. 1999. *Aspects of the morphology and phonology of Kɔnni*. PhD thesis, The Ohio State University.

Carlson, Robert. 1994. *A grammar of Supyire* (Mouton Grammar Library 14). Berlin: Mouton de Gruyter.

Christaller, Johann G. 1875. *A grammar of the Asante and Fante language called Tshi (Chwee, Twi)*. Basel: Basel German Evangelical Mission.

Christaller, Johann Gottlieb. 1881. *A dictionary of the Asante and Fante language called Tshi (Chwee, Twi)*. 2nd ed. Basel: Evangelical Missionary Society.

Christaller, Johann Gottlieb. 1889. Näheres über die Kru-Sprache. *Zeitschrift für afrikanische Sprachen* 3. 1–39.

Clarke, John. 1848. *Specimens of dialects: short vocabularies of languages: and notes of countries & customs in Africa*. ms.

Clements, George N. 1990. The role of the sonority cycle in core syllabification. In John Kingston & Mary E. Beckman (eds.), *Between the grammar and physics of speech* (Papers in Laboratory Phonology 1), 283–333. New York: Cambridge University Press.

Cyffer, Norbert. 2009. Negation patterns in Kanuri. In Norbert Cyffer, Erwin Ebermann & Georg Ziegelmeyer (eds.), *Negation patterns in West African languages and beyond* (Typological Studies in Language 87), 71–91. Amsterdam: John Benjamins.

香港大學圖書館 HKU Libraries

Dingemanse, Mark. 2012. Advances in the cross-linguistic study of ideophones. *Language and Linguistics Compass* 6(10). 654–672. https://doi.org/10.1002/lnc3.361.

Dingemanse Mark. 2023. Interjections. In Eva van Lier (eds.), *The Oxford handbook of word classes*, 477–91. Oxford: Oxford University Press. https://doi.org/10.31234/osf.io/ngcrs

Durie, Mark. 1997. Grammatical structures in verb serialization. In Alex Alsina, Joan Bresna & Peter Sells (eds.), *Complex predicates*, 289–354. Stanford, CA: CSLI Publications.

Eberhard, David M, F. Simons Gary & D. Charles (eds.). 2024. *Ethnologue: Languages of the World*. 27th ed.. Dallas, Texas: SIL International. http://www.ethnologue.com.

Givón, Talmy. 1984. Syntax: a functional-typological introduction. *Benjamins: Amsterdam*.

Goody, J. 1954. The ethnography of the northern territories of the Gold Coast: West of the White Volta. Colonial Official, London. ms.

Gray, Ian R. 1978. Buli noun classes. Sandema and Tamale (GILLBT), Ghana. ms.

Greenberg, Joseph H. 1963. *The languages of Africa (25)*. Research Center in Anthropology, Indiana University.

Güldemann, Tom. 2008. The Macro-Sudan belt: towards identifying a linguistic area in northern sub-Saharan Africa. In Bernd Heine & Derek Nurse (eds.), *A linguistic geography of Africa*, 151–185. Cambridge: Cambridge University Press.

Güldemann, Tom (ed.). 2018. *The languages and linguistics of Africa* (The World of Linguistics 11). Berlin: Mouton de Gruyter.

Hammarström, Harald. 2018. A survey of African languages. In Tom Güldemann (ed.), *The languages and linguistics of Africa*, 1–57. Berlin: Mouton de Gruyter.

Hayes, Bruce. 1989. Compensatory lengthening in moraic phonology. *Linguistic Inquiry* 20(2), 253–306.

Heine, Bernd. 1994. On the genesis of aspect in African languages: the proximative. *Proceedings of the annual meeting of the Berkeley Linguistics Society* 35–46.

Heine, Bernd. 2000. Polysemy involving reflexive and reciprocal markers in African languages. In Z Frajzyngier & T S Curl (eds.), *Reciprocals: forms and functions* (Typological Studies in Language 41), 1–29. Amsterdam & Philadelphia: John Benjamins.

Heine, Bernd & Derek Nurse. (eds.) 2000. *African languages: an introduction*. Cambridge: CUP.

香港大學圖書館 HKU Libraries

Heine, Bernd & Tania Kuteva. 2007. *The genesis of grammar*. Oxford: Oxford University Press.

Hiraiwa, Ken, George Akanlig-Pare, Samuel Atintono, Adams Bodomo, Komlan Essizewa & Fusheini Hudu. 2017. A comparative syntax of internally-headed relative clauses in Gur. Glossa: a journal of general linguistics 2(1): 27. 1–30. https://doi.org/10.5334/gjgl.40

Hughes, Mark H. 1947. Depopulation in the Sisili Area. Navrongo, Ghana. ms.

Hughes, Mark H. 1948. Vare: A study in rural decay. Oxford, ms.

Hyman, Larry M. 1971. Consecutivization in Fe$^{?}$fe$^{?}$. *Journal of African Languages* 10(2). 29–43.

Hyman, Larry M. 1985. *A theory of phonological weight* (Publications in Language Science 19). Dordrecht: Foris Publications.

Jespersen, Otto. 1904. *Lehrbuch der Phonetik*. Leipzig: Teubner.

Kenstowicz, Michael & George Akanlig-Pare (eds.). 2003. *Studies in Buli* (Working Papers on Endangered and Less Familiar Languages). Vol. 4. Cambridge: MIT: MITWPL.

Koelle, Sigismund W. 1854. *Polyglotta Africana*. London: Church Missionary House.

Köhler, Oswin. 1958. Zur Territorialgeschichte des östlichen Nigerbogens. *Baessler-Archiv, Neue Folge* 6. 229–261.

Konig, Ekkehard & Peter Siemund. 2000. Intensifiers and reflexives: a typological perspective. In Zygmunt Frajzyngier & Traci S. Curl (eds.), *Reflexives: forms and functions* (Typological Studies in Language 40), 41–74. Amsterdam & Philadelphia: John Benjamins.

Koptjevskaja-Tamm, Maria. 2012. New directions in lexical typology. *Linguistics*, 50(3), 373–394. https://doi.org/10.1515/ling-2012-0013

Kröger, Franz. 1982. *Ancestor worship among the Bulsa of northern Ghana: religious, social and economic aspects* (Kulturanthropologische Studien). (ed.) Rüdiger Schott & G Wiegelmann. Vol. 9. Hohenschäftlarn: Renner Verlag.

Kröger, Franz. 1992. *Buli-English dictionary - with an introductory grammar and an index English-Buli* (Researches on African Languages and Cultures). Münster: LIT Verlag.

Kröger, Franz. 2001. *Materielle kultur und traditionelles handwerk bei den Bulsa (Nordghana)* (Forschungen Zu Sprachen Und Kulturen Afrikas 10). (ed.) Rüdiger Schott. 2 vols. Münster and Hamburg: LIT Verlag.

香港大學圖書館 HKU Libraries

Kröger, Franz. 2003. Elders, ancestors, sacrificies: concepts and meanings among the Bulsa. In Franz Kröger & Barbara Meier (eds). *Ghana's north: research on culture, religion, and politics of societies in transition*, 243–62. Frankfurt: Peter Lang.

Kröger, Franz. 2008. Raids and refuge: the Bulsa in Babatu's slave wars. *Institute of African Studies Research Review* 24(2), 25–38.

Kröger, Franz. 2020. Can a visual perception be expressed by sounds? The Buli ideophones. *Journal of Bulsa Culture and Society* 13. https://buluk.de/new/?page_id=3515. (accessed on 28 April, 2024).

Kropp Dakubu, M E. 1973. *Sociolinguistic survey of the Buli speaking area*. University of Ghana. ms.

Kropp Dakubu, M. E (ed.). 1988. *The languages of Ghana*. London & New York: Kegan Paul International.

Lesage, Jakob. 2020. *A grammar and lexicon of Kam (àŋwɔ̀m), a Niger-Congo language of central eastern Nigeria*. Paris: Institut National des Langues et Civilisations Orientale.

Lichtenberk, Frantisek. 2000. Reciprocals without reflexives. In Zygmunt Frajzyngier & Traci S. Curl (eds.), *Reciprocals: forms and functions* (Typological Studies in Language 41), 31–62. Amsterdam & Philadelphia: John Benjamins.

Lord, Carol. 1993. Historical change in serial verb constructions. John Benjamins Publishing Company.

Manessy, Gabriel. 1975. *Les langues Oti-Volta: classification généalogique d'un groupe de langues voltaïques*. Paris: SELAF

Manessy, Gabriel. 1979. *Contribution à la classification généalogique des langues voltaiques*. Paris: SELAF.

Manoukian, Madeline. 1951. *Tribes of the northern territory of the Gold Coast.* (Ethnographic Survey of Africa. Western Africa, Part V). London: International African Institute.

Mélançon, Lucien, Eugène Coutu & André Prost. 1974a. Les langues de l'Atakora: VI: Le Buli. *Bulletin de l'Institut Fondamental d'Afrique Noire* 36(2), 323–413.

Mélançon, Lucien (R. P.) & André (R. P.) Prost. 1972. *Dictionnaire Buli - Francais* (Documents Linguistiques 20). Dakar: Publications du Département de Linguistique Générale et de Langue Négro-Africaines.

香港大學圖書館 HKU Libraries

Miehe, Gudrun, Ulrich Kleinewillinghöfer, Manfred von Roncador & Kerstin Winkelmann. 2012. Overview of noun classes in Gur (II)(revised and enlarged version). In Gudrun Miehe, Brigitte Reineke & Kerstin Winkelmann (eds.), *Noun class systems in Gur languages: North Central Gur languages* (Gur Monographs/Monographies Voltaïques), Vol. 2, 5–37. Köln: Rüdiger Köppe.

Miehe, Gudrun, Brigitte Reineke & Kerstin Winkelmann (eds.). 2012. *Noun class systems in Gur langauges: North Central Gur languages* (Gur Monographs/Monographies Voltaïques). Vol. 2. Köln: Rüdiger Köppe.

Migeod, Frederick William Hugh. 1911. *The languages of West Africa.* Vol. 1. London: Kegan Paul, Trench, Trübner & Company.

Musah, Anthony Agoswin. 2018. *A grammar of Kusaal: a Mabia (Gur) language of northern Ghana*. Berlin: Peter Lang.

Mwinlaaru, Isaac Nuokyaa-Ire. 2017. *A systemic functional description of the grammar of Dagaare*. PhD thesis, Hong Kong Polytechnic University.

Naden, Tony. 1988. The Gur languages. In *The languages of Ghana*, 12–49. London & New York: Kegan Paul International & International African Institute.

Naden, Tony. 1989. Gur. In John Bendor-Samuel & Rhonda L. Hartell (eds.), *The Niger-Congo languages: a classification and description of Africa's largest language family*, 140–168. New York: University Press of America.

Neukom, Lukas. 1995. *Description grammaticale du nateni (Bénin): Système verbal, classification nominale, phrases complexes, textes* (Arbeiten Des Seminars Für Allgemeine Sprachwissenschaft 14). Zürich: Universität Zürich.

Nuyts, Jan & Johan Van Der Auwera. 2016. *The Oxford handbook of modality and mood*. Oxford University Press.

Olawsky, Knut J. 1999. *Aspects of Dagbani grammar, with special emphasis on phonology and morphology*. Munich: Lincom Europa.

Osam, Emmanuel Kweku. 2003. An introduction to the verbal and multi-verbal system of Akan. In D Beermann & L Hellan (eds.), *Proceedings of the workshop on multi-verb constructions*. Trondheim: University of Trondheim.

Palmer, Frank Robert. 2001. *Mood and modality*. Cambridge: Cambridge University Press.

Poulter, Todd. 1985. Buli phonology. ms.

Poulter, Todd. 1989. Buli phonology 1989. Ghana Institute of Linguistics, Literacy, and Bible Translation, Tamale, Ghana. ms.

香港大學圖書館 HKU Libraries

Pulleyblank, Douglas, Darius Adjong, Alexander Angsongna, Lisa Matthewson & Ariwan A. Suhairi. 2024. *Ri-investigating inverse number in Dagaare*. In M. Ryan Bochnak, Eva Csipak, Lisa Matthewson, Marcin Morzycki & Daniel K. E Reisinger (eds.), UBC Occasional Papers in Linguistics 9, Papers in honour of Hotze Rullmann), 309–326

Rattray, R. S. 1932. *The tribes of the Ashanti Hinterland*. 2 vols. Oxford: Oxford University Press.

Reineke, Brigitte. 1995. Derivative verbformen und serielle verbkonstruktionen in Gur sprachen. *Afrika und Übersee* 78, 55–72.

Rodrigues, Nina. 1935. *Os Africanos no Brasil*. 2a edição. São Paulo.

Saboro, Emmanuel. 2014. *Slavery, memory and orality: analysis of song texts from northern Ghana*. PhD thesis, University of Hull.

Saboro, Emmanuel. 2017. The wound and the voice: verbal articulations of enslavement among the Bulsa and Kasena of Ghana. *Nordic journal of African studies* 26(1), 28.

Saboro, Emmanuel. 2021. War songs: slavery, oral tradition, and identity construction. In Akinyemi, A., & Falola, T. (eds.). *The Palgrave Handbook of African Oral Traditions and Folklore*, 437–452, Springer International Publishing.

Saboro, Emmanuel. 2022. *Wounds of our past: remembering captivity, enslavement and resistance in African oral narratives* (Studies in Global Slavery 12), Leiden: Brill. https://doi.org/10.1163/9789004500198.

Schiller, Eric. 1991. *An autolexical account of subordinating serial verb constructions*. PhD thesis, University of Chicago.

Schott, Rüdiger. 1977. Sources for a history of the Bulsa in northern Ghana. *Paideuma*, 141–168.

Schott, Rüdiger. 1988. Traditional systems of social security and their present-day crisis in West Africa. In F von Benda-Beckmann, E Casino, F Hirtz, G Woodman & H Zacher (eds.), *Between kinship and the state: social security and law in developing countries*, 89–108.

Schott, Rüdiger (ed.). 1993. *Bulsa Sunsuelima: folktales of the Bulsa in northern Ghana. Folktales of the Supernatural*, Series S (Research on African Languages and Cultures). Vol. 1, Part 1, Münster: Lit.

Schott, Rüdiger (ed.). 1996. *Bulsa Sunsuelima: folktales of the Bulsa in northern Ghana. Folktales of the Supernatural*, Series S (Research on African Languages and Cultures). Vol. 1, Parts 2 & 3, Münster: Lit..

香港大學圖書館 HKU Libraries

Schott, Rüdiger & Franz Kröger. 1982. Language and culture of the Bulsa in Ghana. In Bernd Heine (ed.), *Recent German research on Africa: language and culture*, 76–79. Boppard: Germany

Schwarz, Anne. 1999. Preverbal negative markers in Buli. *Gur Papers/Cahiers Voltaïques*, 4, 91-98.

Schwarz, Anne. 2005. *Aspekte der morphosyntax und tonologie im Buli (mit schwerpunkt auf dem Buli von Wiaga)*. PhD thesis, Humboldt-Universität zu Berlin.

Schwarz, Anne. 2009. Tonal focus reflections in Buli and some Gur relatives. *Lingua* 119(6), 950–972.

Schwarz, Anne. 2012. A1. Buli. In Gudrun Miehe, Brigitte Reineke & Kerstin Winkelmann (eds.), *Noun class systems in Gur languages: North Central Gur languages* (Gur Monographs / Monographies Voltaïques), Vol. 2, 39–61. Köln: Rüdiger Köppe Verlag.

Schwarz, Anne. 2016. All-in-one and one-for-all: Thetic structures in Buli grammar and discourse. *Diversity in African languages*. Language Science Press Berlin 81–100.

Schwarz, Anne & Ines Fiedler. 2007. Narrative focus strategies in Gur and Kwa. In Enoch Oladé Aboh & Malte Zimmermann (eds.), *Focus strategies in African languages* (Trends in Linguistics: Studies and Monographs), Vol. 191, 267–286. Berlin: Mouton de Gruyter.

Selkirk, Elisabeth. 1984. On the major class features and syllable theory. In Morris Halle, Mark Aronoff & Richard T. Oehrle (eds.), *Language sound structure: studies in phonology*, 107–136. Cambridge, Mass: MIT Press.

Sulemana, Abdul-Razak. 2019. Q-particles and the nature of Covert movement: Evidence from Buli. *Glossa: a journal of general linguistics* 4(1). https://doi.org/10.5334/gjgl.810.

Sulemana, Abdul-Razak. 2021. *Non-finite complementation: a case study of Bùlì*. PhD dissertation, Massachusetts Institute of Technology.

Swadesh, Mauricio, Evangelina Arana, John T Bendor-Samuel & W.A.A Wilson. 1966. A preliminary glottochronology of Gur languages. *Journal of West African Languages* 3(2), 27–65.

Tauxier, Louis. 1912. *Le noir du Soudan: pays Mossi et Gourounsi* (documents et analyses). Paris, France.

Tauxier, Louis. 1924. *Nouvelles notes sur le Mossi et le Gourounsi*. Paris, France.

Von Wright, Georg Henrik. 1951. *An essay in modal logic*. Amsterdam: The Netherlands.

香港大學圖書館 HKU Libraries

Westermann, Diedrich. 1913a. Die Mossi-Sprachengruppe im westlichen Sudan. *Anthropos,* 467–504.

Westermann, Diedrich. 1913b. *Die Grussisprachen im westlichen Sudan* (Zeitschrift Für Kolonialsprachen, Band 4).

Westermann, Diedrich. 1914. *Fortsetzung: Die Grussisprachen im westlichen Sudan* (Zeitschrift Für Kolonialsprachen, Band 5).

Westermann, Diedrich. 1927. *Die Westlichen Sudansprachen und ihre Beziehungen zum Bantu*. Berlin: de Gruyter.

Westermann, Diedrich. 1928. *Evefiala, or Ewe-English dictionary*. Berlin: Dietrich Reimer.

Westermann, Diedrich. 1930. *A study of the Ewe language*. [translated from German by A.L. Bickford-Smith]. London: Oxford University Press.

Westermann, Diedrich & Margaret A. Bryan. 1952. *Languages of West Africa* (Part 2). London: Oxford University Press.

Winkelmann, Kerstin & Gudrun Miehe. 2009. Negation in Gur: genetic, areal and unique features. In Norbert Cyffer, Erwin Ebermann & Georg Ziegelmeyer (eds.), *Negation patterns in West African languages and beyond* (Typological Studies in Language 87), 167–204. Amsterdam: John Benjamins.

Yakpo, Kofi. 2019. *A grammar of Pichi* (Studies in Diversity Linguistics 23). Berlin: Language Science Press. https://doi.org/10.5281/zenodo.2546450.

Zwernemann, Jürgen. 1958. Shall we use the word ‘Gurunsi’? *Africa* 28(2), 123–125. https://doi.org/10.2307/1157130.

香港大學圖書館 HKU Libraries

Appendix A: Slave raids in Buluk[28]

An excerpt of a narrative account of slave-raids as recounted by Naab Ayieta Azantilo, the longest-serving paramount chief.

Tì	*kò-(ba)-má*	*lī*	*jàm*	*bō=ró*	*lá*
1PL	father-2-DEF.2	SUB	CNC.PST	be.located=there	CDM

When our fathers lived

àlì	*kpālīŋ-sā*	*kā*	*tɛ̄ŋ-ká.*
and	fight-6	not.located	land.5-DEF.5

there were no fights in the land

àtì	*tì*	*kò-(ba)-má*	*jàm*	*bō*
CONN	1PL	father-2-DEF.2	CNC.PST	be.located

and our fathers lived

tɛ̄ŋ-ká	*pō*	*nālīm*	*nyīnīī*
land.5-DEF.5	in	peace.9	only

in the land in total peace

Tì	*kò-(ba)má*	*lī*	*wòm*	*dí-í*	*lá…*
1PL	father-2-DEF.2	FOC	hear.PFV	CL.3-REL	CDM

what our fathers heard…

Bà	*wòm*	*ká*	*nú-bá*	*lī*	*bò*	*tɛ̄ŋ-ká*	*pō*
CL.2	hear.PFV	FOC	person-2	FOC	be.located	land.5-DEF.5	in

They heard that people (strangers) were in the land

à	*nyìèm*	*á*	*kāāsī*	*tɛ̄ŋ-ká.*
SC	roam	IPFV	destroy	land.5-DEF.5

roaming purposefully, destroying the land

[28] Elements in brackets are dropped in speech.

香港大學圖書館 HKU Libraries

Bà	*yùē*	*lī*	*Bábátù*	*ànì*	*Sámórí*
CL.2	name.4	FOC	NAME	and	NAME

Their names are Babatu and Samori

Bábátù	*àlì*	*Sámórí*	*zàànì*	*ká*	*Wàgàdúgù*
NAME	and	NAME	set.off.from.PFV	FOC	NAME

Babatu and Samori set off from Ouagadougou

à	*kààsì*	*Wàgàdúgù*	*tɛ̄ŋ-ká*	*yègà*	*yègà*
SC	destroy.PFV	PLACE	land.5-DEF.5	a.lot	a.lot

and caused significant damage to the land of Ouagadougou

àtì	*bà*	*yìg*	*nù-(ba)-má*	*á*	*dā.*
CONN	CL.2	capture.PFV	person-2-DEF.2	IPFV	sell

and they (Babatu and Samori) captured the people and were selling them

Bà	*nī*	*yìg*	*nù-(ba)-má*	*á*	*dā*	*lá,*
CL.2	SUB	catch.PFV	person-2-DEF.2	IPFV	sell	CDM

When they caught the people and were selling them

Kù	*bènì*	*dú-lá*	*yègà*
CL.7	keep.long.PFV	there-DIST	a.lot

It lasted a very long time over there

àtì	*bà*	*yāā*	*ŋmàn*	*jàm*	*tàmá*	*tɛ̄ŋ-ká.*
CONN	CL.2	then	again	come.PFV	1PL.INCL	land.5-DEF.5

and then they also came to our land

Bà	*lìŋ*	*jàm*	*ká*	*Wa*
CL.2	initially	come.PFV	FOC	PLACE

They initially came to Wa

香港大學圖書館 HKU Libraries

à	*nyìèm*	*á*	*nāmsī*	*nú-(ba)-má*
SC	roam.PFV	IPFV	brutalise	person-2-DEF.2

and roamed, brutalising the people

à	*yìg*	*bá*	*á*	*dā*	*à*	*chɛ̀ng*	*Sàvùrúk*
SC	capture.PFV	CL.2	IPFV	sell	SC	go.PFV	PLACE

captured them and were selling them, and went to Savuruk

à	*yìg*	*nídɔ̀-(ba)*	*-pāgrɔ̄-(ba)-má*	*gēlā*
SC	capture.PFV	man-2	strong-2-DEF.2	some

and captured some of the strong men

à	*tùsì*	*nípò-(ba)*	*nísɔ̀m-(ba)-má*	*ànì*	*nídɔ̀-(ba)*
SC	yank.PFV	woman-2	hoary-2-DEF.2	and	man-2

nísɔ̀m-(ba)-má
hoary-2-DEF.2

and yanked the hoary women and the hoary men

bàsì	*àtì*	*bà*	*bá-í*	*à*	*kùm*
put.away	CONN	CL.2	CL.2-REL	SC	cry.PFV

away and some of them cried

à	*nàm*	*à*	*kpì*
SC	suffer.PFV	SC	die.PFV

and suffered and died

à	*tā*	*bímbàáŋ-sà-ŋá*	*ànì*	*nípò-(ba)*	*làà-sà-ŋá*
SC	take	young.man-6-DEF.4	and	woman-2	young-6-DEF.4

and took the young men and the young women

à	*chɛ̀ŋ*	*félík*	*tɛ̄ŋ*	*gà*	*dà*
SC	go.PFV	whiteman.5	land.5	go	sell

to took (them) to Whiteman's land to sell

香港大學圖書館 HKU Libraries

àtì	*bà*	*gā*	*á*	*tōm*	*tūīm-á*	*àsī*	*yɔ̄m-á.*
CONN	3PL	go	IPFV	work	work-4	as	slave-4

for them to go and be working as slaves.'

Bábátù	*ànì*	*Sámórí*	*dàn*	*tɔ̀rìm*	*yìg*	*fú*
NAME	and	NAME	if	tirelessly	capture.PFV	2SG

If Babatu and Samori tirelessly captured you

fì	*kpì=í=mā*		*lá;*	*fì*	*àn*	*ŋmān*	*chīēn* *a.*
2SG	die=FOC=PRED.EMPH		CDM	2SG	NEG	again	come SP

You're dead; you're no longer coming back

Bábátù	*lī*	*jàm*	*á*	*nyɛ̄*	*dí-í*
NAME	SUB	CNC.PST	IPFV	do	CL.3-REL
lá	*lī*	*lá*			
CDM	FOC	DIST			

That is what Babatu used to do.'

Tɛ̄ŋ-sā	*yègà*	*àn*	*bāg*	*zàànì*
land-6	a.lot	NEG	be.able	stand

Many towns could not stand

à	*tɔ̀m*	*lì*	*wá*
SC	shoot.arrow	with	CL.1

to shoot arrows with him

Nú-(ba)-má	*yègà*	*chàlì*	*jàm*	*ká*	*Sándēm*
person-2-DEF.2	a.lot	run.PFV	come	FOC	NAME

A lot of the people ran here to Sandema

àtì	*Sándēm*	*nàà(b)-wá*	*bàsì*	*àtì*	*bà*	*bō=ró*
CONN	NAME	chief.1-DEF.1	allow.PFV	CONN	3PL	be.located=there

'and the chief of Sandema allowed them to stay

香港大學圖書館 HKU Libraries

Sándēm	*tà*	*ká*	*pāgrɔ̄-bā*	*à*
Sandema	have	FOC	strong-2	SC

nyìnì	*tì*	*kɔ̀-(ba)-má*
since	CL.8	father-2-DEF.2

Sandema has strong men, since the (days of) our fathers

Bábátù	*ànì*	*Sámórí*	*wòm*	*ká*
NAME	and	NAME	hear.PFV	FOC
tàmá	*Sándēm*	*ká*	*pāgrɔ̄-bā.*	
1PL.INCL	NAME	FOC	strong-2	

Babatu and Samori heard that WE, SANDEMA PEOPLE, are STRONG

àtì	*bà*	*gòmsì*	*màgsì*	*àlīgè*	*jàm*	*Bùlùk*
CONN	CL.2	prepare.PFV	be.well	before	come.PFV	PLACE

and they prepared well before [they] came to Buluk

àtì	*tàmá*	*mɛ̄*	*tàngbàn-ní,*	*àchám,*	*zèrì.*
CONN	1PL.INCL	also	overlord.3-DEF.3	NAME	refuse.PFV

and our overlord also refused

yāā	*jùèrì*	*gbɔ̀ŋ*	*zúk*	*à*	*wù*
then	climb.PFV	roof.7	top.7	SC	call.out.PFV

and climbed up a rooftop and called out

àyén	*Sándēm*	*bíík*	*kán*	
QUOT	NAME	child.5	NEG.IMP	escape

that no child of Sandema should escape

àlì	*wá*	*lì*	*māā*	*bá.*
and	CL.1	FUT	help	CL.2

because he (Acham) will help them

香港大學圖書館 HKU Libraries

Sándēm	*pāgrɔ̄-(ba)-má*	*nyīēm*	*jūērī*	*ká*
NAME	strong-2-DEF.2	usually	climb	FOC

The strong (men) of Sandema usually climb

tìì-sà	*zúk*	*á*	*tɔ̄m*	*píé*
tree-6	top.7	IPFV	shoot	arrow.4

on top of trees shoot arrows

dā-ā	*míéná*	*àtì*	*Bùlùk*	*zàànì*	*à*	*nyà*	*nyìŋ*	*yɔ̀g-sá*
day-4	all	CONN	PLACE	stand.PFV	SC	get.PFV	body.5	cool-6

every day, until Buluk gained peace

Bábátù	*nì*	*wà*	*tɔ̄m-mú*	*àn*	*bāg*
NAME	and	CL.1	warband.9-DEF.9	NEG	be.able
zàànì	*tɔ̀m*		*píé*	*nì*	*Sándēm*
stand.PFV	shoot.arrow.9		arrow.4	with	NAME

Babatu and his warband could not stand to shoot arrows with Sandema.

Bà	*wààŋ*	*chāāb*	*ká*	*míéná*	*míéná.*
CL.2	scatter.PFV	each.other	FOC	all	all

They scattered completely.

香港大學圖書館 HKU Libraries

Appendix B: Cooking process of *wɔ̄gtā* soup

Surrounded by cooking ingredients and utensils, Linda Adocta prepares *wɔ̄gtā* soup while providing a commentary on her preparation process

M̀	*chìén*	*m̀*	*dīg*	*ká*	*wɔ̄g-tā*	*jèn-tà*
1SG	about.to	1SG	cook	FOC	sabdariffa-8	soup-8

'I am about to prepare sabdariffa soup.'

Nyíám-mú	*lī*	*lá*	*tì*	*m̀*	*pà*
water.9-DEF.9	FOC	DIST.PRSTV	and	1SG	take.PFV

tììlì	*bòlìm-mú*	*zúk*
put.over	fire.9-DEF.9	top.7

That is the water I have put over the fire

Sùnkpààm-mú	*lī*	*ǹnā*	*àtì*	*m̀*	*pà*	*á*
[29]groundnut-DEF.9	FOC	PROX.PRSTV	and	1SG	take	IPFV

nyō	*tùìk-ká*	*á*	*kūrī*
put.into	mortar.5-DEF.5	IPFV	pound

Here is the groundnut that I am putting into the mortar and pounding

Fì	*dàn*	*pà*	*nyò=ró*	*sēkā*
2SG	when	take	put.into=there	unless

'When you put it (groundnut) into it (the mortar),

fì	*kūrī*	*bú*	*à*	*bè*
2SG	pound	CL.9	SC	be.fine

you have to pound it into fine [paste]

[29] 'Groundnut' is equivalent to 'peanut'.

Fì	*dàn*	*kùrì*	*nùè*	*fì*	*yàà*	*pā*
2SG	when	pound	finish	2SG	then	take

'When you finish, you take

fì	*wɔ̄g-tā-ŋá*	*tììlì*	*bòlìm-mú*	*zúk*	
2SG	sabdariffa-8-DEF.4	put.over	fire.9-DEF.9	top.7	

then you put your (pot of) sabdariffa over the fire

Wɔ̄g-tā-ŋá	*lī*	*ǹnā*	*m̀*	*pà*	*á*	*nyō*
sabdariffa-8-DEF.4	FOC	PROX.PRSTV	1SG	take	IPFV	put.into

'Here is the SABDARIFFA I am putting into

bìmbì-ní	*pō*
cooking.pot-DEF.3	in

the cooking pot

Wɔ̄g-tā-ŋá	*dé*	*àn*	*mīīsā*
sabdariffa-8-DEF.4	these	NEG	be.sour

'These sabdarrifas are not sour

Tì	*dàn*	*ká*	*wɔ̄g-tā*	*tíí*	*nī*	*mììsā*	*m̀*
CL.8	if	FOC	sabdariffa-8	REL.8	be	be.sour	1SG
tín	*á*	*dīg*	*ká=mā*				
CTE	IPFV	boil	FOC=PRED.EMPH				

'Had they been sour sabdariffas I would boil it'

à	*dùèntì*	*nyíám-mú*	*à*	*bàsì*	
SC	decant	water.9-DEF.9	SC	put.away	

and drain off the water

à	*pìlìm*	*pà*	*á*	*tīīlī*	*dú*
and	again	take	IPFV	put.over	there

and put it again over it (over the fire)

香港大學圖書館 HKU Libraries

Dí *nī* *sɔ̄ā* *tì* *m̀* *pà* *á*

CL.3 FOC own CONN 1SG take IPFV

nyō=ró *dí-lá*

put.into=there CL.3-DIST

That is why I'm putting it into it that way

Fì *dàn* *nùèrì* *fì* *līg* *àtì* *tì* *vāāsī*

2SG when finish 2SG cover CONN CL.8 boil

When you finish, you cover it to boil

àtì *fì* *kūrī* *fì* *sùnkpààm-mú*

CONN 2SG pound 2SG groundnut.9-DEF.9

and you your groundnut

sùnkpààm-mú *nī* *lá* *tì* *m̀* *bō=ró*

groundnut.9-DEF.9 FOC DIST CONN 1SG be.located=there

á *kūrī*

IPFV pound

That is the GROUNDNUT I am pounding

Bù *bè=é=mā* *lá*

CL.9 be.cooked=FOC=PRED.EMPH CDM

'It is cooked (that way).'

M̀ *jèèné-wá* *ǹnā*

1SG onion-DEF.1 PROX.PRSTV

Here is my onion

M̀ *dàn* *nùèrì* *m̀* *gèb* *gèb* *jèèné-wá*

1SG when finish 1SG cut cut onion.1-DEF.1

When I finish, I chop

香港大學圖書館 HKU Libraries

Fì *dàn* *gèb* *gèb* *nùèrì,* *fì* *pā* *nyò=ró*
2SG when cut cut finish 2SG take put.into=there
When you finish chopping (the onion), you put it into (the soup)

Fì *dék* *nī* *á* *yāālī* *dí-í* *lá*
2SG EMPH SUB IPFV want CL.3-REL CDM
As you, yourself, want it

Fì *dàn* *gèb* *nùèrì,*
2SG when cut finish
When you finish chopping (the onion)

fì *pā* *nyò* *fì* *wɔ̄g-tā-ŋá* *pō*
2SG take put.into 2SG sabdariffa-8-DEF.4 in
When you finish chopping (the onion)

Fì *dàn* *pà* *nyò=ró* *à* *nùèrì,*
2SG when take put.into=there SC finish
When you have put into it

Fì *yàà* *kūūrī* *à* *nyò* *fì* *wɔ̄g-tā-ŋá* *pō*
2SG then fetch.out SC put.into 2SG sabdariffa-8-DEF.4 in
You then fetch it (pounded groundnut) and into your sabdariffa

sùnkpààm-mú *nī* *lá* *m̀* *kùùrì* *à*
groundnut.9.DEF.9 FOC CDM 1SG fetch.out SC
That is the GROUNDNUT I have fetched out

nyò *wɔ̄g-tā-ŋá* *pō* *lá*
put.into sabdariffa-8-DEF.4 in CDM
and put into the sabdariffa

香港大學圖書館 HKU Libraries

Fì *dàn* *nùèrì,* *fì* *līg*
2SG when finish 2SG cover
When you finish, you cover (it)

àtì *tì* *vāāsī*
CONN CL.8 boil
so that it (soup) boils

M̀ *zàgsìm* *ǹnā,* *m̀* *jɔ́ŋ* *mɛ̄* *ǹnā,*
1SG minnow PROX.PRSTV 1SG dawadawa also PROX.PRSTV
Here is my minnow, here is my dawadawa also

Fì *pā* *pìlìm* *ká* *chāāb* *á* *kūrī*
1SG take mix FOC each.other IPFV pound
'You mix them together and pound (them)

Zàgsìm-mú *nì* *jɔ́ŋ-kú* *lá*
minnow.9-DEF.9 and dawadawa.7-DEF.7 DIST
àtì *m̀* *bō=ró* *á* *kūrī* *lá*
CONN 1SG be.located=there IPFV pound CDM
That is the minnow and dawadawa I am pounding

Fì *kūrī* *ká=mā* *àtì* *kù* *á*
2SG pound FOC=PRED.EMPH CONN CL.7 IPFV
bè *ǹnā* *lɔ́ɔ́lɔ́k*
become.soft PROX.PRSTV fine:IDEO
'You pound it so that it becomes fine.

àtì *fi* *pà* *nyò* *jèn-tà-ŋá* *pō*
CONN 2SG take put.into soup-8-DEF.4 in
and put it into your soup

香港大學圖書館 HKU Libraries

Wɔ̄g-tā-ŋá *dàn* *vààsì* *nì* *sùnkpààm-mú*
sabdariffa-8-DEF.4 when boil with groundnut.9-DEF.9
When the sabdariffa, together with the groundnut, boils

fì *yàà* *pā* *dùìsūk* *à* *dàm*
2SG then take ladle SC stir
You then stir (soup) with a ladle

Mì *à* *dām* *ká=mā* *àyén* *sùnkpààm-mú* *yɔ̄tī*
1SG IPFV stir FOC=PRED.EMPH PURP groundnut.9-DEF.9 dissolve
I stir it for the groundnut to dissolve

Fì *yàà* *bāsī* *tì* *bù* *vāāsī* *màgà*
1SG then leave so.that CL.9 boil little
Then you leave it to boil a little

Bù *dàn* *vāāsī* *nùè,*
CL.9 when boil little
When it (soup) has boiled little, you wash your cow meat

fì *sūūrī* *náá-(b)* *lām-mú* *à* *wāā* *bú* *àlì*
2SG wash cow-9 meat-DEF.9 SC steam CL.9 with
You wash the cow meat and steam it with

jèèné *kàmántòòsì,* *àlì* *ŋmāāzùŋ*
onion tomatoes and pepper.5
à *kpìì* *nyò* *jèn-tà-ŋá* *pō*
SC pour put.into soup-8-DEF.4 in
onion, tomatoes, and pepper, and pour it (meat) into the soup

Fì *dàn* *nùè* *fì* *pā* *yés-á* *màgà* *nyò=ró*
2SG when finish 2SG take salt-4 little put.into=there
When you finish, you out a little salt into it

香港大學圖書館 HKU Libraries

à	*bàsì*	*tì*	*tì*	*vāāsī*
SC	leave	so.that	CL.8	boil

and leave it (soup) to boil

Fì	*yàà*	*lām*	*nyà*	*sī*	*yés-á-ŋá*	*pàà*	*yà*
2SG	then	taste	see	whether	salt-4-DEF.4	reach	PRF

'You then taste to see whether the level of salt is appropriate.'

Tì	*lì*	*vāāsī*	*màgà*	*màgà,*	*gà*	*bè*
CL.8	FUT	boil	little	little	go	be.cooked

'It will boil little-by-little until it is ready

Tì	*à*	*vāāsī*	*ká=mā*	*àtì*	*kpāām*
CL.8	IPFV	boil	FOC=PRED.EMPH	CONN	oil.9
à	*jām*	*tì*	*nāmbī-ē*		
IPFV	come	CL.8	face-4		

'It boils, and oil comes up to its surface.'

Míéná	*lī*	*lá*
all	FOC	CDM

'That's all.'

香港大學圖書館 HKU Libraries

The traditional hut regulates heat.
(Photo credit: Francis Atiim Apochaab)

A traditional hut

香港大學圖書館 HKU Libraries

The baobab is useful for its medicinal, shelter, and cultural values
(Photo credit: Francis Atiim Apochaab)

A baobab tree

香港大學圖書館 HKU Libraries